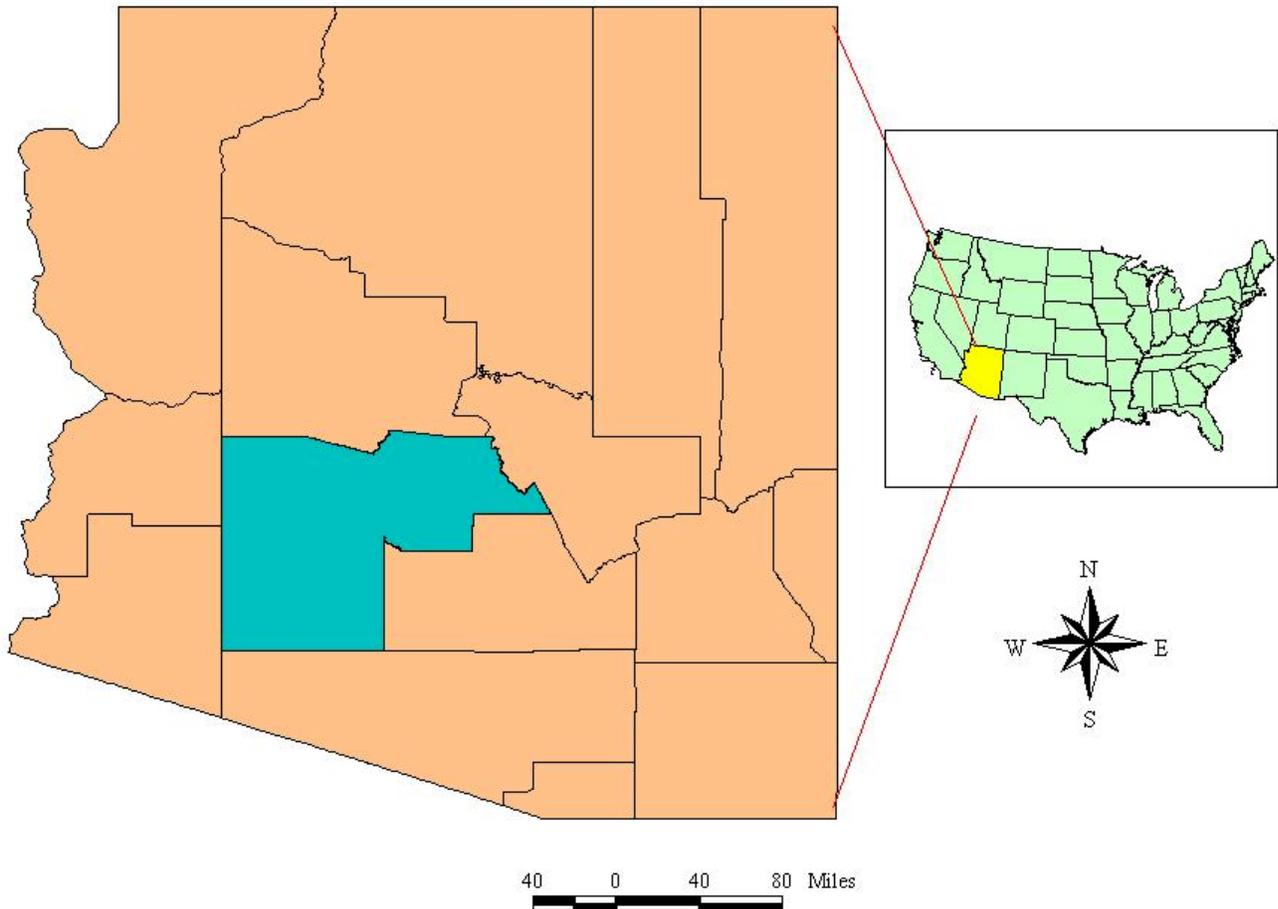




Maricopa County Department of Public Health



Health Status Report 1991-1995

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A message from the director

This document describes the changing nature of health status in Maricopa County since 1990. I am sending it to you for your information in the hopes that the information contained in the Executive Summary and the data in the remainder of the report might be of interest to you as you perform your responsibilities.

The information in this report reflects not only the health status of the population in Maricopa County, the most populous county in Arizona and the fastest growing county in the United States, but also the dedicated work of nurses, physicians, communicable disease investigators, health educators, epidemiologists and statisticians and the support staff who have worked very hard to accumulate, compile, organize and print the material, while laboring to promote, preserve and protect the health of the individuals and communities in this county.

This report will be followed by a series of annual reports that will provide a comprehensive portrait of our county's changing health status. These data help those of us who work for the Maricopa County Department of Public Health to measure our progress in reducing the risk factors associated with disease, disability and death in this region. These data are milestones, which allow us to measure our success in achieving the goals and objectives set by our planning process. We hope that the information included in this series of reports will help those who work in local health departments to use our information as benchmarks to show your own successes. For those who develop policy for state and local health, we hope that these reports will provide the information you need to define your goals for public health, and the objectives that might be met through the expenditure of public funds to improve the health of your community.

I invite you to read this report, use it, share it with colleagues and be critical of it. To improve this product, we would appreciate your criticism and comments. Improving the people's health is a collaborative process; helping us create a better summary of the health status of the population in Maricopa County will help all of us do a better job in improving the public's health.

Jonathan B. Weisbuch, M.D., M.P.H.
Director, Maricopa County
Department of Public Health

Preface

The World Health Organization defines health as “a state of complete well-being, physical, social, and mental, and not merely the absence of disease or infirmity.”¹ If we accept this definition, then any report attempting to measure the health status of a population should measure the quality of life as well as the frequency of disease, mortality and risk factors adverse to health.

This five year health status report (1991-1995) is the first one that the Maricopa County Department of Public Health produces covering at one time morbidity, mortality, risk factors and socioeconomic information, as well as some health care utilization indicators. It is the first step towards a systematized comprehensive yearly report on the health of the county residents. Some topics, though not covered here, will be covered in future reports, such as environmental quality, nutrition and domestic violence. Some of these omissions were inevitable because the data did not exist; for example, there is no centralized collection of information in the county on domestic violence that does not result in death. Some omissions were caused by delays in the availability of the information. Other omissions were deliberate, responding to the lack of staff and time to include everything we would ideally want to include in a “comprehensive” report. In the coming years, as the production of this report becomes a systematized routine, we will be able to make it truly comprehensive.

Health status assessment is intended to measure changes and trends in the health of the population and in its living conditions, whether the changes have been brought about deliberately or accidentally. This process is a tool for good planning, helping to target interventions towards the most pressing, important and/or urgent problems. It allows evaluation of programs and of progress toward goals. It facilitates comparisons of areas and populations to establish priorities and set expectations. Finally, it gives

the community a picture of where we are and the direction in which we are moving.

For the five-year period 1991-1995, the most important and influential factor in determining the state of the people’s health has been population growth. Maricopa County has been growing at a rate of four to five percent per year. This is the equivalent of moving a city of 100,000 inhabitants into the county every year, with all the problems accompanying such a population. Ultimately, every chronic, acute or infectious disease, every issue related to injuries and safety, as well as everything related to health care utilization will suffer the impact of the rapidly expanding population. Every public health function is critically affected by this phenomenon: the protection of the food and the water supply; the maintenance of high immunization levels; the control of communicable diseases; safety on the highways; violence prevention and the management of biologic or other emergencies that might threaten the population’s safety.

This report is addressed to many users. The Maricopa County Department of Public Health will use it to plan programs, to target problem areas, to decide priorities, to evaluate previous work and to identify health problems. The Division of Epidemiology will use it to establish surveillance, analyses and research priorities based on what we see as adverse indicators of health, unexplained findings and puzzles. Businesses and corporations can use it to aid in making decisions about community work, as well as about expansion or about relocation to the county. Students can use it as an aid in their community assessment or evaluation of health problems. Service organizations and institutions can use it to focus programs upon specific target areas. It can be used to assess needs or to support funding requests.

1. As quoted in the *The Future of Public Health*, Institute of Medicine National Academy Press, Washington D.C., 1988. pg 39.

Maricopa County is very diverse, both geographically and in the composition of its population. No single report can encompass everything in every detail. You might need more information about specific health problems. You might need more information about a neighborhood, a city and an unincorporated collection of census tracts. You might need information about a specific population group. You can contact the Division of Epidemiology and request a special report for a specific purpose. If we can provide you with the information, we will. If not, we will help guide you in your search for information by

referring you to the agencies or institutions that can provide those data. Much of the information in this report will be available soon on the Department's Web page.

We hope this report will be useful to you. We have included a form at the end of this report for you to send us your comments. Even if it takes a little time and trouble, we would greatly appreciate your making the effort to let us know your reactions. The whole point of the report is to fulfill your information and analyses needs. We would like to know what those specific needs are.

Division of Epidemiology and Data Services

Acknowledgments

Many people have helped to produce this report. The following people (in alphabetical order) were instrumental in finally having it see the light of day.

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Introduction

Maricopa County, as well as other areas in Arizona, experienced exceptional demographic growth from 1990 to 1995. The Census figures for these two years show a net increase of 20 percent in the total population, and up to 50 percent in minority groups (see Figure 1). The increase has been greatest among children under 20 years old (28 percent) and among those 30-59 years of age (31 percent). Maricopa County's population pyramid (see Figure 2, page 2) is becoming more and more similar to that of the United States, with greater proportions of the population distributed in the

middle age range, but still with higher percentages of young children than the national figures.

The geographic distribution of the population also has changed. Although all health status areas grew in total population, Glendale, Scottsdale, Tempe, Mesa and the West County grew at faster rates. The Scottsdale health status area increased by 34 percent and the Mesa Area by 28 percent in the five intercensal years. The percentage share of the county population decreased for the city of Phoenix and increased for all other areas (see Table 1, page 3).

Figure 1
Population by race/ethnicity and gender
Maricopa County, 1990 Census and 1995 Special Census

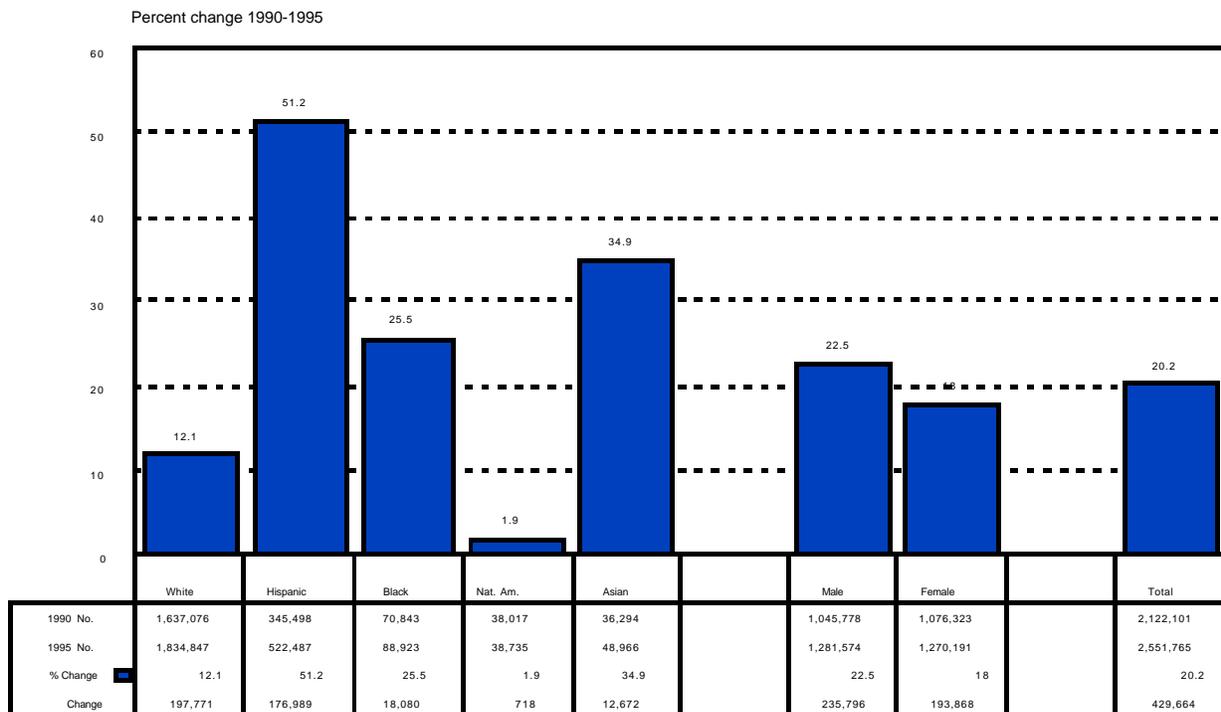
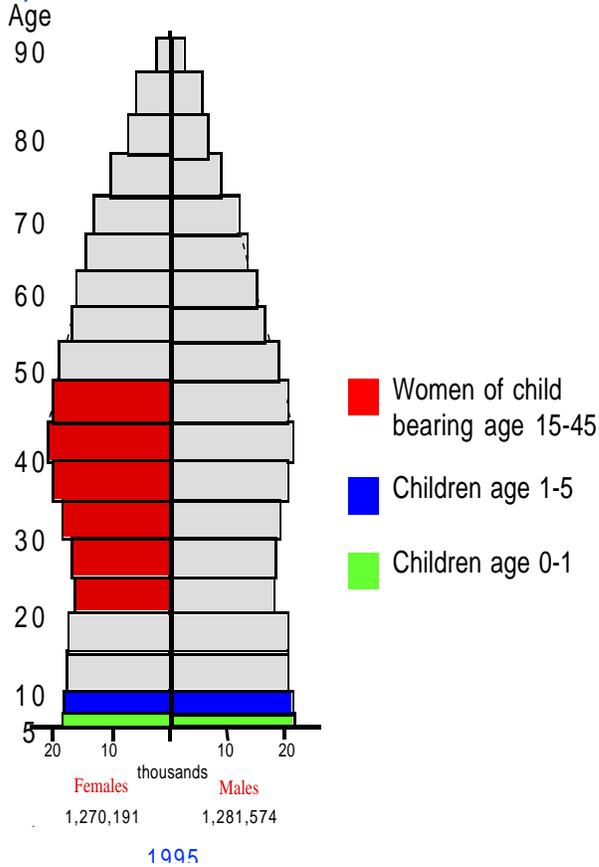


Figure 2
Maricopa County Population Pyramid
Biologic Environment
Population Distribution: 1995

Population Distribution: 1995



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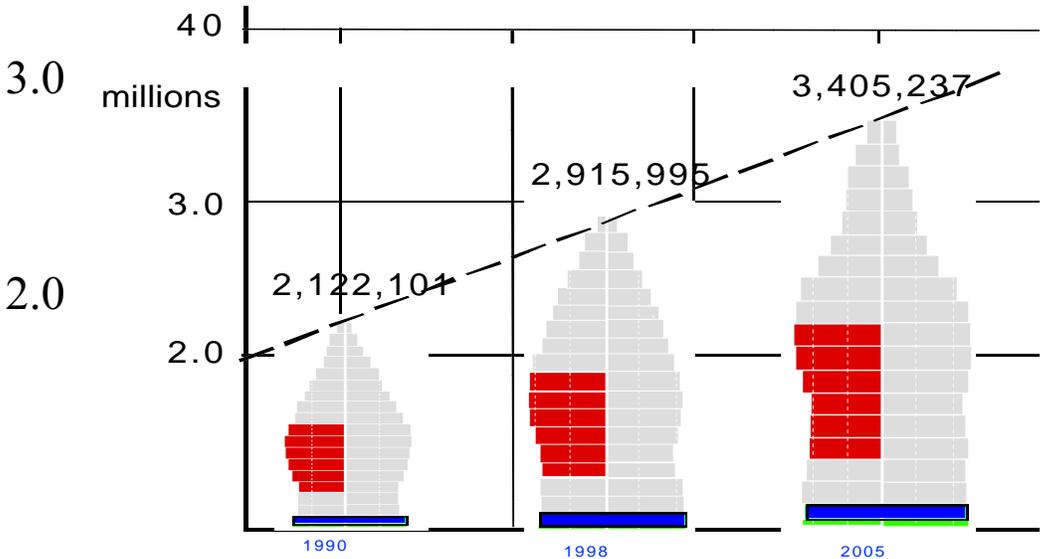


Table 1
1995 population by health status area

Area	Male	%	Female	%	Total	%	% Increase since 1990
Sun City	29,863	43.0	39,667	57.0	69,530	27.7	21
Glendale	123,356	49.7	124,687	50.3	248,043	9.7	24
North Phoenix	246,005	50.1	244,625	49.9	490,630	19.2	15
Central Phoenix	198,476	50.5	194,400	49.5	392,876	15.2	12
South Phoenix	111,488	53.1	98,602	46.9	210,090	8.2	9
Scottsdale/N.E.	102,032	48.6	108,091	51.4	210,123	8.2	34
Tempe/Ahwatukee	111,966	51.7	104,667	48.3	216,633	8.5	25
Mesa/East Valley	295,822	49.9	296,923	50.1	592,745	23.2	28
West/Valley	58,122	52.0	53,755	48.0	111,877	4.4	22
Indian Reservations	4,444	48.2	4,774	51.8	9,218	0.4	12
Total	1,281,574	50.2	1,270,191	49.8	2,551,765	99.9	20

Natality

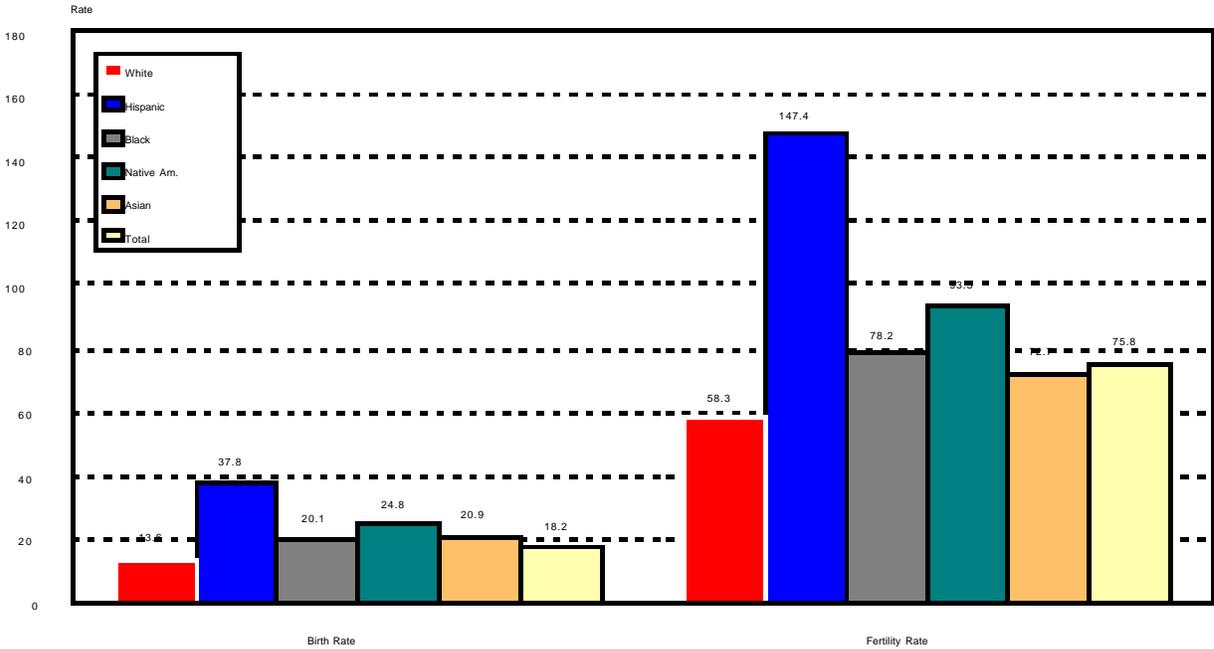
Births increased by 10 percent during the period 1991 - 1995. Minorities, including African-Americans, Hispanics/Latinos, Asians and Native Americans, have significantly higher birth and fertility rates than Whites, in some cases three times higher (see Table 2 and Figure 3, page 4). Hispanics made up 34 percent of births in 1995 (see Table 3, page 4) although they comprise just 20 percent of the total population. Other minorities follow a similar pattern.

Teenage births continue to be of concern in Maricopa County. Compared to the most recent available U.S. data, the fertility rates of Hispanic/Latino adolescents in Maricopa County are above the national average (Table 2) and account for most of the increase in the total county adolescent fertility rates. These high rates of pregnancies and live births among adolescents is worrisome for both medical and socioeconomic reasons.

Table 2
Births per 1,000 women
by age and race/ethnicity

Age	10 - 14				15 - 17				18 - 19			
	W	H	B	Total	W	H	B	Total	W	H	B	Total
M.C. 1995	0.5	5.1	3.4	1.8	23.3	128.3	61.4	49.5	74.3	256.7	157.7	120.4
U.S. 1995	0.4	2.7	4.3	1.3	22.0	72.9	72.1	36.0	66.1	157.9	141.9	89.1

Figure 3
Birth* and fertility rates**
Maricopa County, 1995



*Births per 1,000 1995 population.
 **Births per 1,000 women aged 15-44.

Table 3
Resident number of births by race/ethnicity of mother and year,
Maricopa County

	1991	1992	1993	1994	1995
TOTAL	39,907 (100.0)	40,077 (100.0)	40,392 (100.0)	42,313 (100.0)	44,020 (100.0)
Non Hispanic White	25,071 (62.8)	24,723 (61.7)	24,532 (60.7)	24,852 (58.7)	25,495 (57.9)
Hispanic	11,238 (28.2)	11,809 (29.5)	12,282 (30.4)	13,662 (32.3)	14,909 (33.9)
Non Hispanic Black	1,846 (4.6)	1,775 (4.4)	1,711 (4.2)	1,772 (4.2)	1,627 (3.7)
Native American	1,104 (2.8)	1,071 (2.7)	1,086 (2.7)	1,112 (2.6)	1,076 (2.4)
Asian	630 (1.6)	709 (1.8)	754 (1.9)	868 (2.1)	867 (2.0)
Other	18 (<0.1)	10 (<0.1)	27 (0.1)	47 (0.1)	46 (0.1)

The percent of deliveries without prenatal care in Maricopa County also have been consistently higher than the national average. A comparison of Maricopa County figures with the latest available U.S. figures shows that a higher percentage of mothers of all ethnicities except Asian did not receive prenatal care in the first trimester (see Table 4). In 1995, 8.3 percent more mothers did not get prenatal care in the first trimester than nationally. By age, the mothers most at risk for not having prenatal care in the first trimester are teenage mothers and those age 40 years and older.

The percentage of deliveries paid by Medicaid through the Arizona Health Care Cost Containment System

(AHCCCS) has increased over time, from 34 percent in 1991 to 43 percent in 1995.

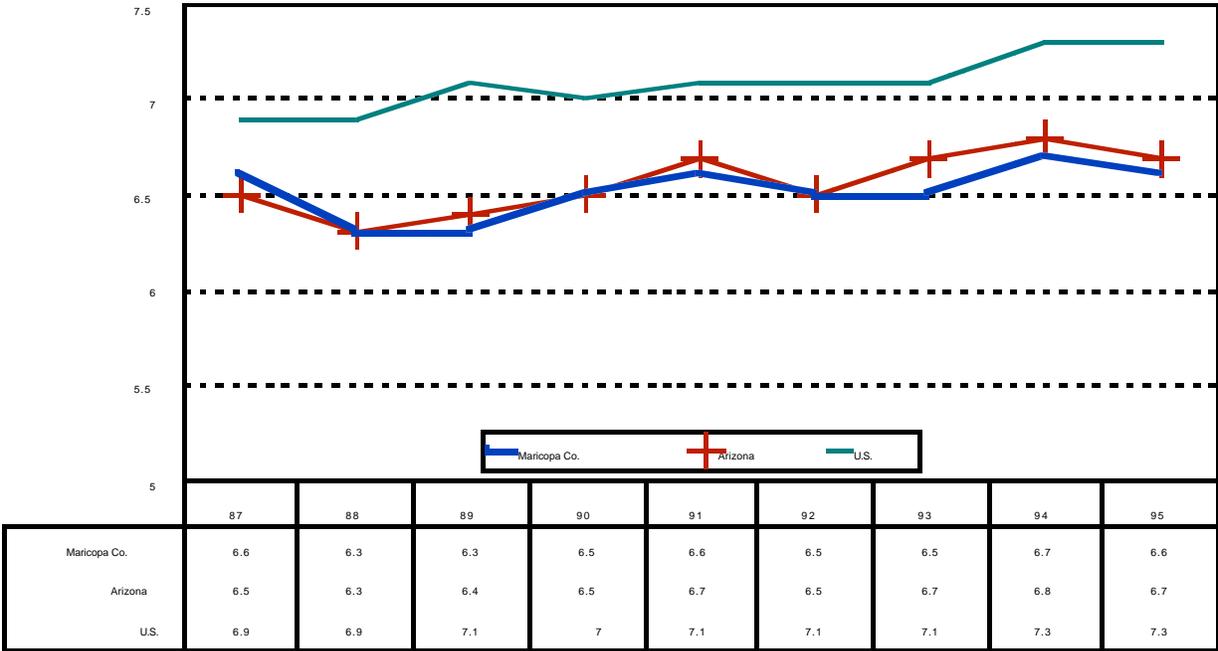
The total low birthweight rate in Maricopa County is moderate, 6.6 percent. It is below the national average, but has shown some tendency to increase over the five year period (see Figure 4, page 6). The major reason for this low rate is the small percentage of all births in Maricopa County born to African American mothers. As shown in Figure 5 (page 6), African-American births have twice the low birthweight rate of white infants (13.7 percent). This results in higher infant mortality and morbidity. All other ethnic groups have comparably low rates. This same pattern is also evident among premature births (see Table 5, page 7).

Table 4
Percent of women giving birth with no prenatal care
during the first trimester by race/ethnicity
Maricopa County, 1987-1995 and U.S., 1987-1995

Race/ethnicity	1987		1988		1989		1990		1991	
	US%	%MC								
White	18.3	20.2	18.2	20.7	17.3	21.4	16.7	18.7	16.3	17.4
Hispanic	40.0	37.9	41.7	43.6	43.3	46.3	42.2	45.5	41.3	42.7
Black	40.0	37.6	39.6	41.2	40.1	45.6	39.3	40.3	38.1	40.7
Native American	42.4	47.1	41.9	55.6	42.1	61.8	42.1	59.4	40.1	52.9
Asian	25.0	23.0	24.5	23.5	25.2	27.7	24.9	19.5	24.7	20.3
Total	24.0	25.4	24.1	27.8	24.5	29.9	24.2	28.0	23.8	26.6

Race/ethnicity	1992		1993		1994		1995	
	US%	%MC	US%	%MC	US%	%MC	US%	%MC
White	15.1	15.3	14.4	16.9	17.2	17.2	16.4	17.6
Hispanic	37.9	37.7	35.2	40.7	32.7	41.3	30.9	41.3
Black	36.0	35.2	33.9	35.7	31.7	34.3	29.6	34.5
Native American	37.9	46.9	36.6	43.7	34.8	46.9	33.3	44.3
Asian	23.4	17.3	22.4	21.0	20.3	23.3	20.1	18.4
Total	22.3	23.7	21.1	25.8	19.8	26.6	18.7	27.0

Figure 4
Percent low birthweight births* by year, 1987-1995
Maricopa County, Arizona and United States



Source: National Center for Health Statistics, Maricopa County Department of Public Health, Arizona Department of Health Services.
 *Low birthweight births = < 2,500 grams.

Figure 5
Low birthweight* by race/ethnicity
Maricopa County, 1991-1995

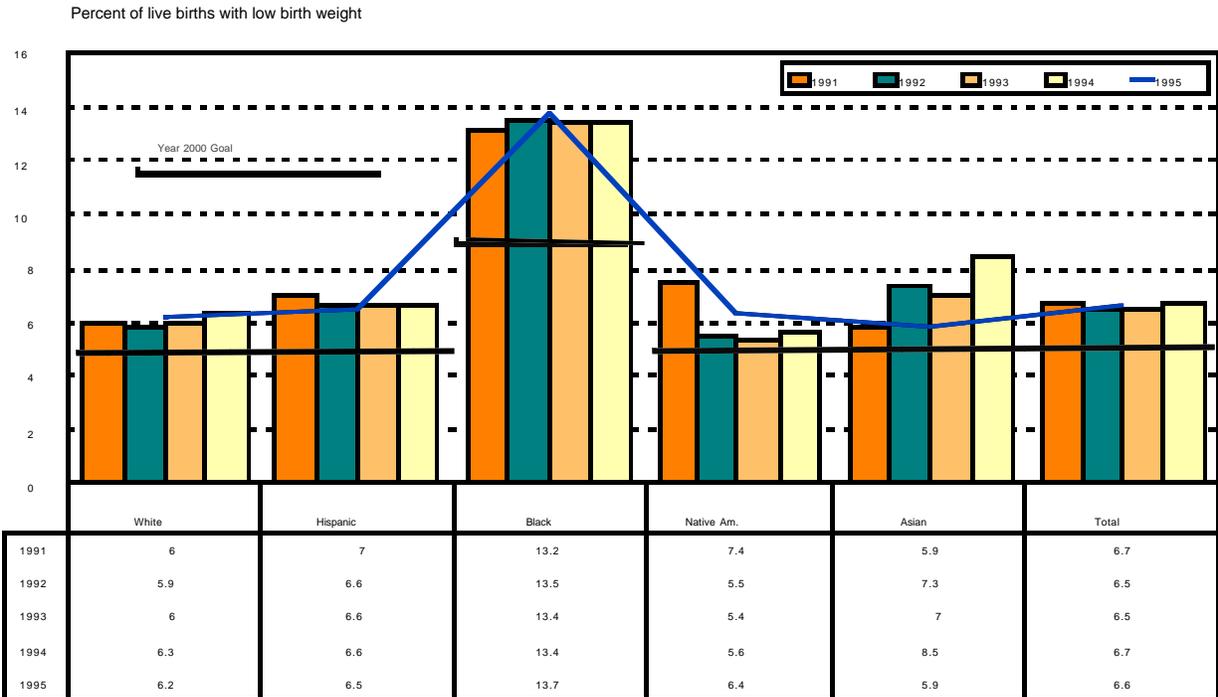


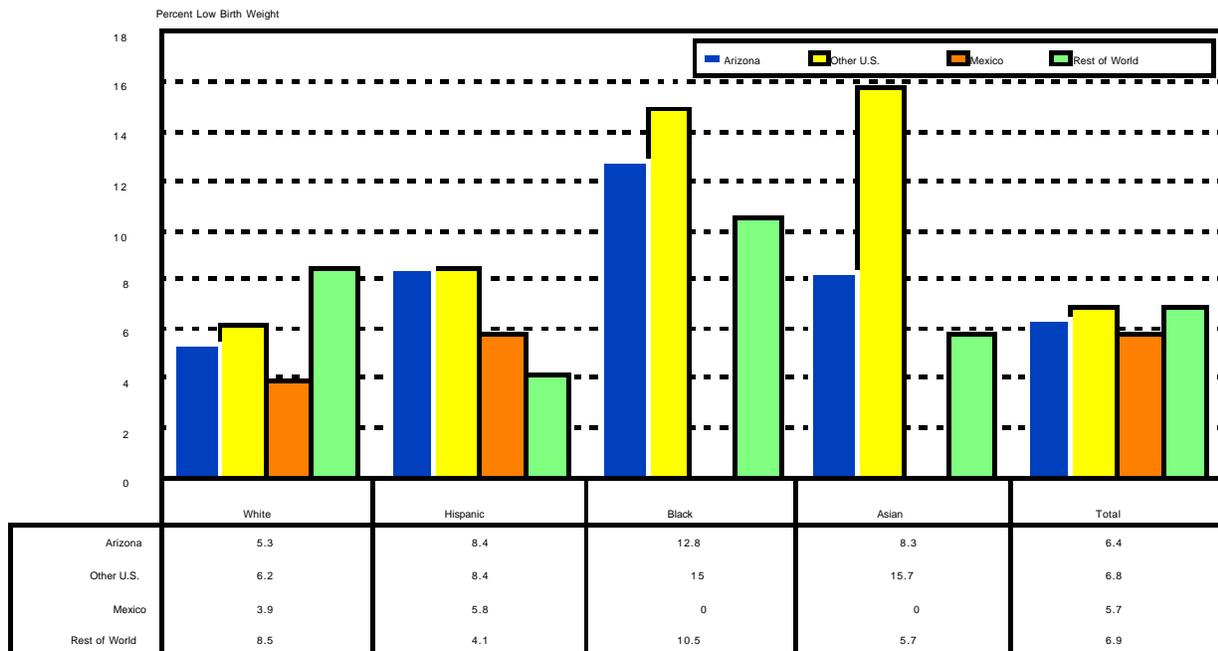
Table 5
Percent premature deliveries (<37 weeks) by year and ethnicity

	1991	1992	1993	1994	1995
Total	7.9	8.3	8.8	8.9	8.8
Hispanic	8.2	8.6	8.7	8.8	8.7
Black	14.4	13.4	15.1	13.8	15.6
Native American	8.4	6.6	7.4	7.6	9.1
Asian	7.0	8.3	8.8	9.8	8.0
White	7.3	7.8	8.4	8.6	8.5

Figure 6 shows the percent of low birthweight babies among deliveries in 1993 by ethnicity and place of birth of the mother. As is the case in the U.S. as a whole, mothers born outside the U.S. have generally a better outcome (lower percentage of small babies) than those born in the U.S., regardless of ethnicity. The exception to this pattern in the county are White/Anglo mothers born outside the U.S. or Mexico.

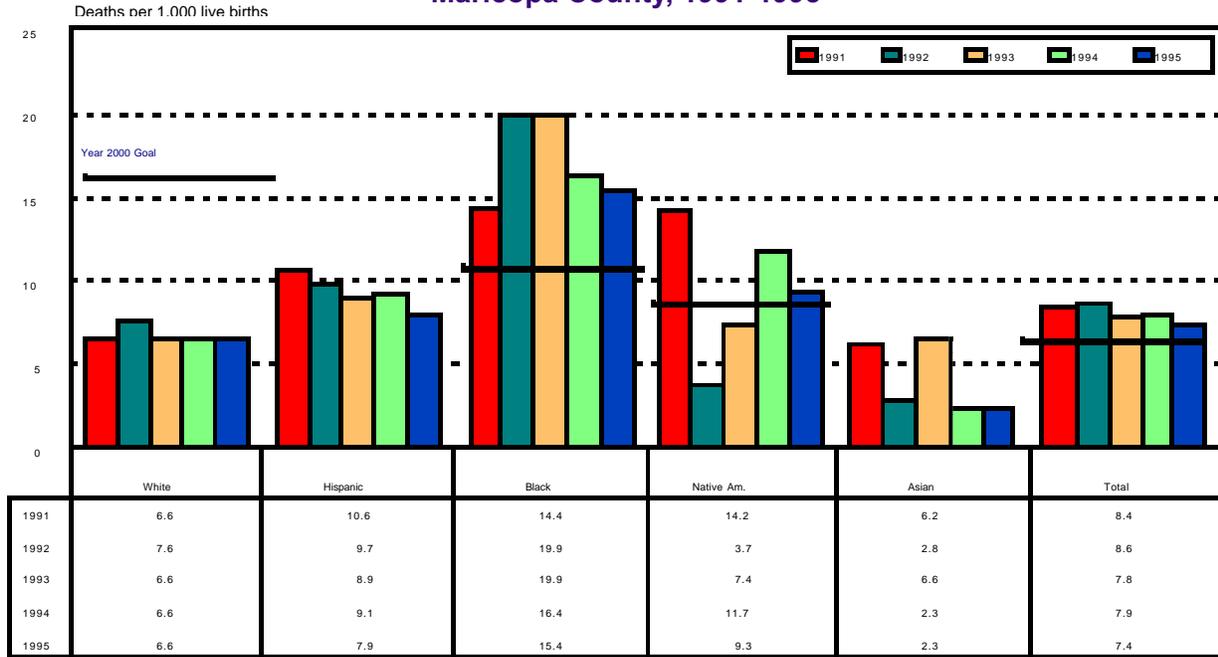
In Maricopa County, mothers born in Mexico have the lowest percentage of low birthweight babies. This pattern is most likely the consequence of two main phenomena, the “healthy immigrant” effect (immigrants are generally healthy, because it takes health to migrate), and the benefit of some cultural traits among mothers born elsewhere (social support systems, traditional diets, low proportions of smokers and others).

Figure 6
Percent low birthweight births* by race/ethnicity and mother’s place of birth
Maricopa County, 1993



*Low birthweight = <2,500 grams.

Figure 8
Infant mortality rates by race/ethnicity
Maricopa County, 1991-1995



Because Whites and Mexican-Americans have low infant mortality nationally, Year 2000 Objectives for these populations have not been specified.

Table 6
Year 2000 Objectives to reduce infant mortality
and Maricopa County rates, 1987-1995

Objective number	Year 2000 national objectives	Maricopa County crude mortality rates*								
		87	88	89	90	91	92	93	94	95
14.1	Reduce the infant mortality rate to $\leq 7/1,000$	10.0	10.0	9.2	8.9	8.3	8.6	7.8	7.8	7.4
14.1a	among Blacks $\leq 11/1,000$	19.4	25.9	18.8	20.0	14.6	19.9	19.9	16.4	15.4
14.1b	among American Indians $\leq 8.5/1,000$	8.9	9.6	9.0	11.9	10.1	3.7	7.4	11.7	9.3
14.1d	Reduce the neonatal mortality rate to $\leq 4.5/1,000$ live births	6.4	6.4	5.7	5.7	5.1	4.9	5.2	5.0	4.8
14.1e	among Blacks $\leq 7/1,000$ live births	13.8	20.6	11.6	12.4	9.8	9.1	12.3	9.0	6.8
14.1g	Reduce the postneonatal mortality rate to $\leq 2.5/1,000$ live births	3.6	3.6	3.5	3.2	3.3	3.6	2.6	2.9	2.6
14.1h	among Blacks $\leq 4/1,000$ live births	5.6	5.3	7.2	7.6	4.8	10.8	7.6	7.3	8.6
14.1i	among American Indians $\leq 4/1,000$ live births	4.0	4.4	4.5	5.5	4.5	1.9	1.8	7.2	3.7

**Some rates might not add due to rounding.*

Figure 9
Infant mortality, selected health status areas
Maricopa County, 1987-1995

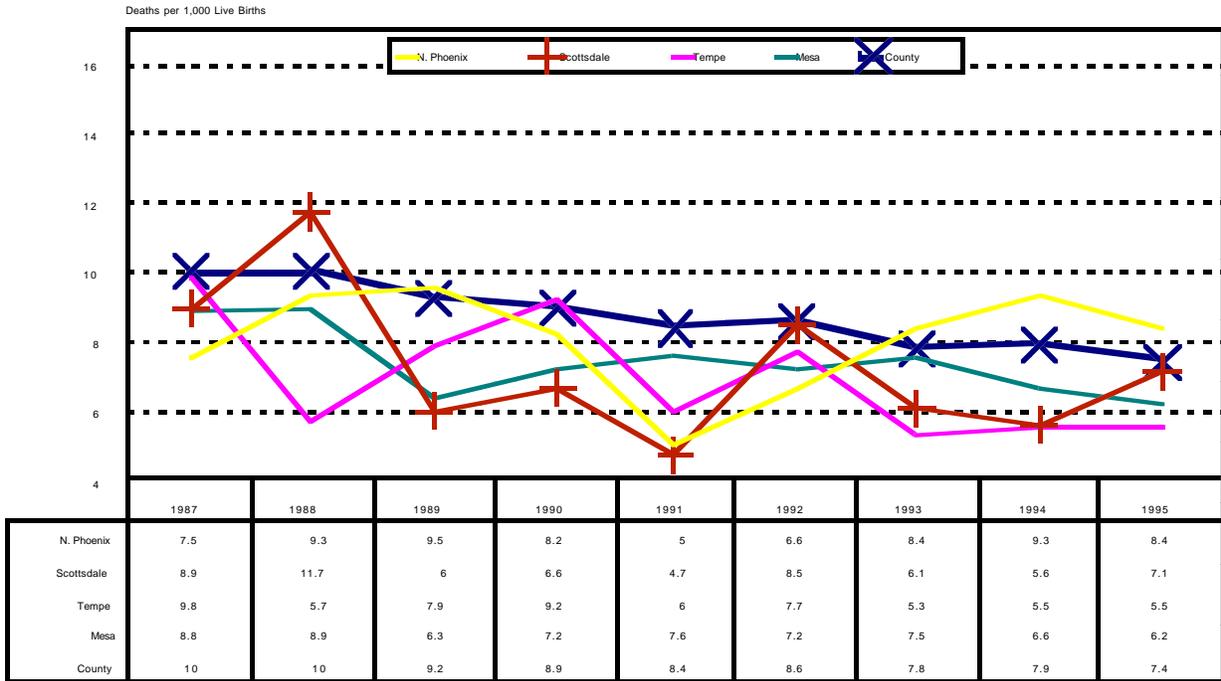
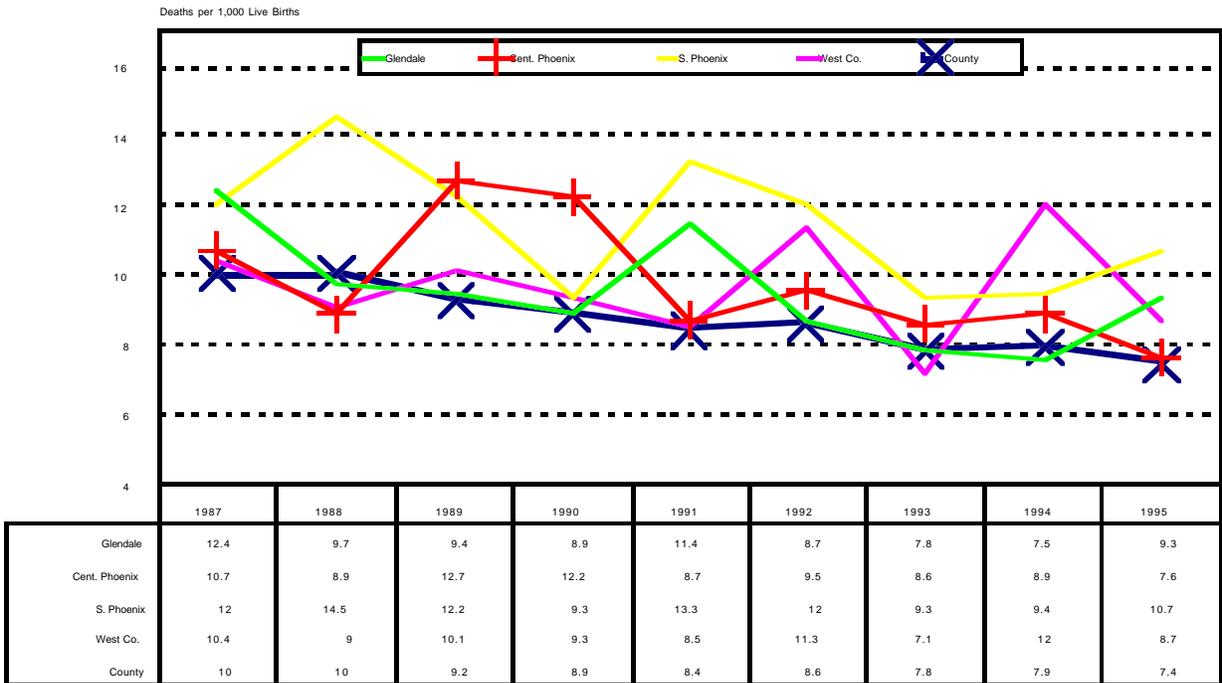


Figure 10
Infant mortality, selected health status areas
Maricopa County, 1987-1995



The single largest group of causes of death among infants is congenital anomalies. This group is followed by Sudden Infant Death Syndrome (SIDS) as the next largest cause of death. Although the percentage of infant deaths attributable to SIDS changes over the years, the general trend has been a decreasing one, from 19.8 percent in 1991 to 13.3 percent in 1995. For more details, see Table 7.

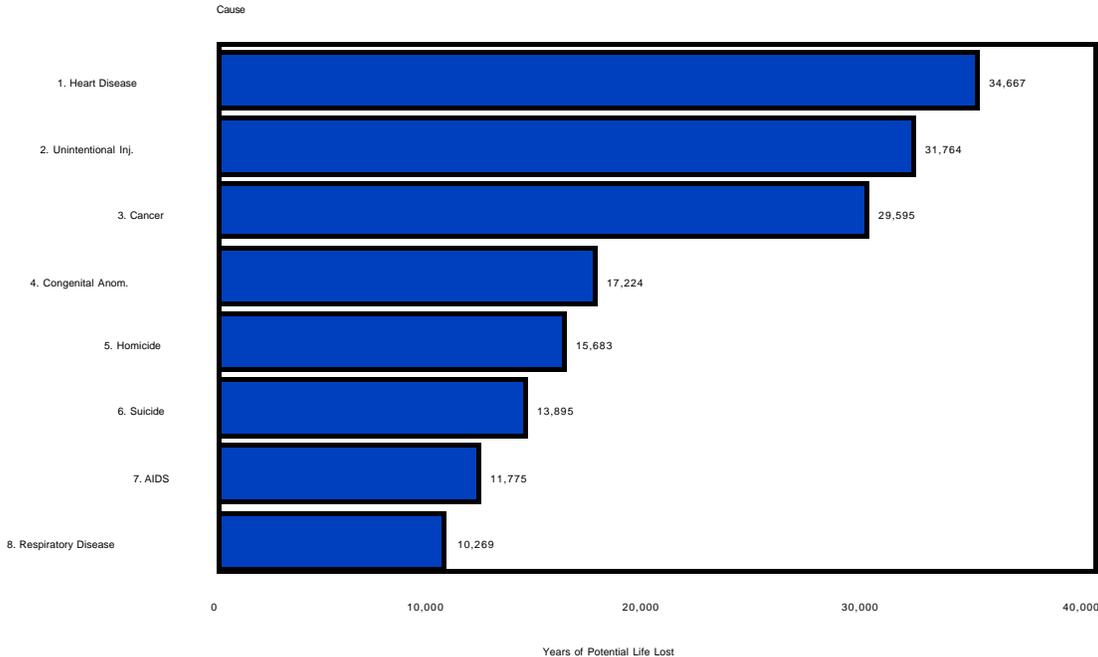
Figure 11 shows the leading causes of death by

years of potential life lost. Heart disease, cancer and respiratory illnesses are among the leading causes of death as measured by both years of potential life lost and mortality rates. Unintentional injuries, homicide, suicide and AIDS are especially important among people under 45 years of age, because together with mortality related to substance abuse, they comprise 57 percent of all deaths in this age group. Figures 12-17 (pages 12-15) show mortality rates by cause for specific age groups.

Table 7
Maricopa County infant mortality
number of deaths by cause, 1987-1995

Cause of death	1987	1988	1989	1990	1991	1992	1993	1994	1995
Infectious diseases	4	9	10	5	4	10	7	7	9
Neoplasms	2	5	4	2	4	1	1	0	4
Endocrine deficiencies	3	2	3	4	4	1	1	5	3
Blood diseases	0	0	0	0	0	0	1	1	0
Nervous system/mental disorders	5	3	6	6	3	5	2	3	10
Circulatory system	11	5	8	5	5	10	2	8	8
Respiratory system	6	10	13	7	12	13	13	19	14
Digestive system	3	0	0	1	8	2	2	5	6
Genitourinary system	2	0	0	0	0	2	1	0	1
Skin and bone diseases	1	0	0	0	0	0	1	0	1
Congenital anomalies	246	256	225	255	212	217	233	218	209
SIDS	71	78	74	50	66	58	34	42	43
Ill-defined diseases	0	3	6	5	4	5	6	2	4
Unintentional injuries	11	9	10	15	7	15	11	17	8
Intentional injuries	1	1	2	2	3	3	2	5	4
Other injuries	1	1	0	0	1	0	0	0	0
County total	367	382	361	357	333	342	317	332	324

Figure 11
Total years of potential life lost by selected cause of death
Maricopa County, 1995



() Number = Rank as cause of death.

Figure 12
Leading causes of death by age (age < 20)
Maricopa County, 1995

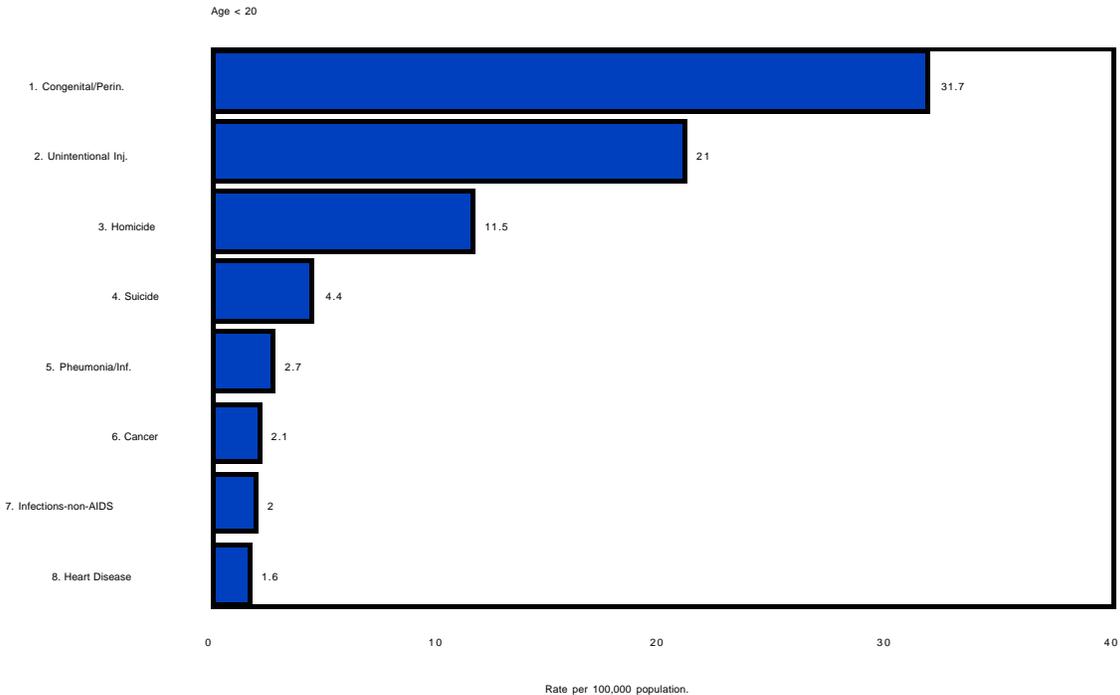


Figure 13
Leading causes of death by age (age 20-24)
Maricopa County, 1995

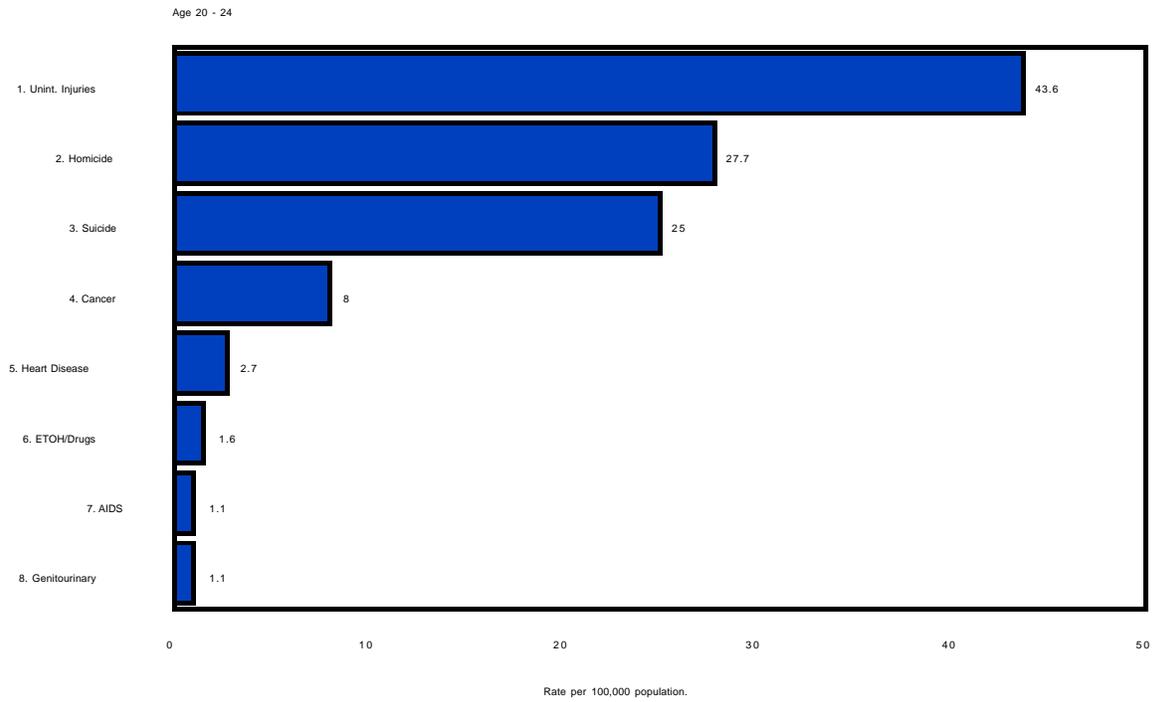


Figure 14
Leading causes of death by age (age 25-34)
Maricopa County, 1995

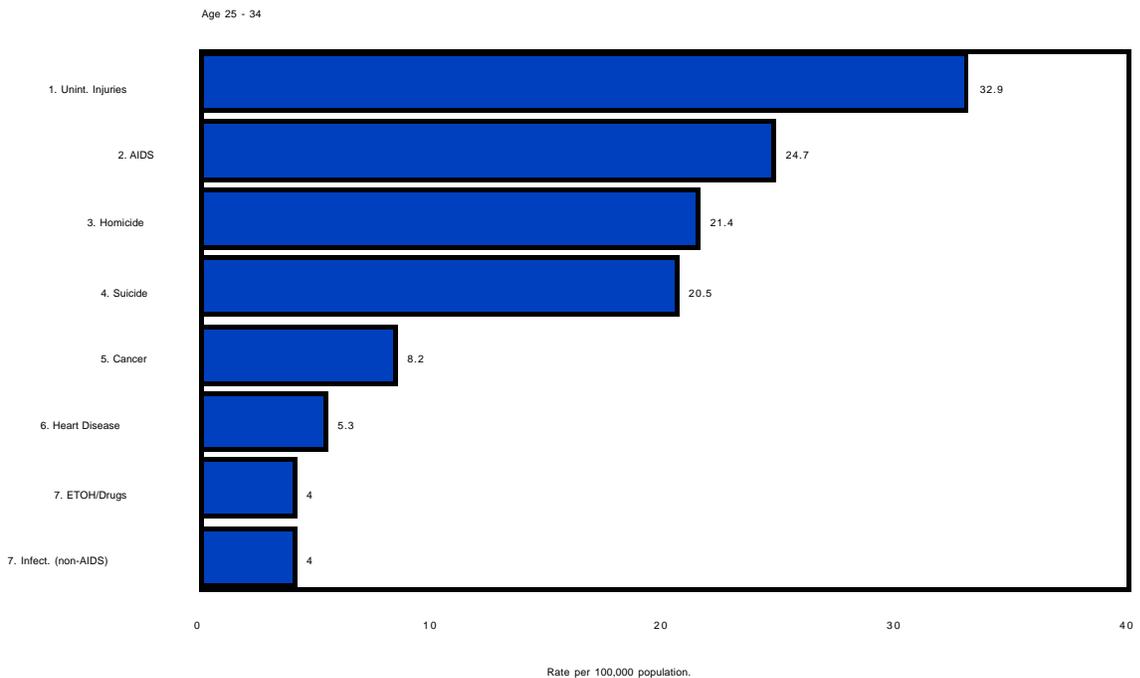


Figure 15
Leading causes of death by age (age 35-44)
Maricopa County, 1995

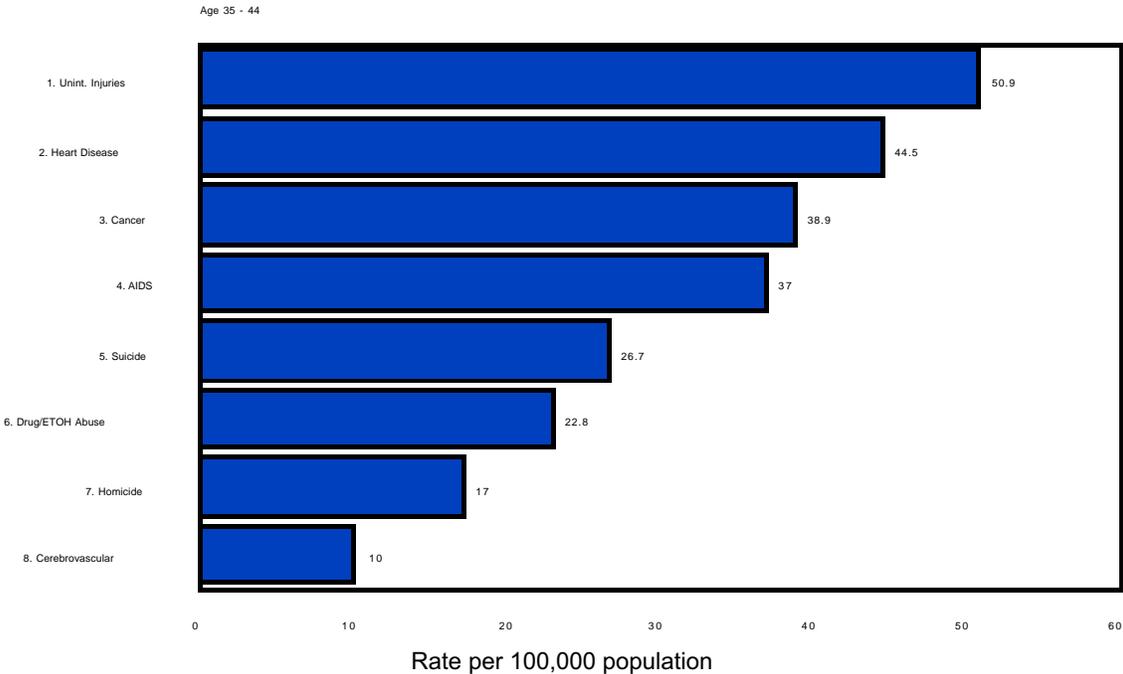


Figure 16
Leading causes of death by age (age 45-64)
Maricopa County, 1995

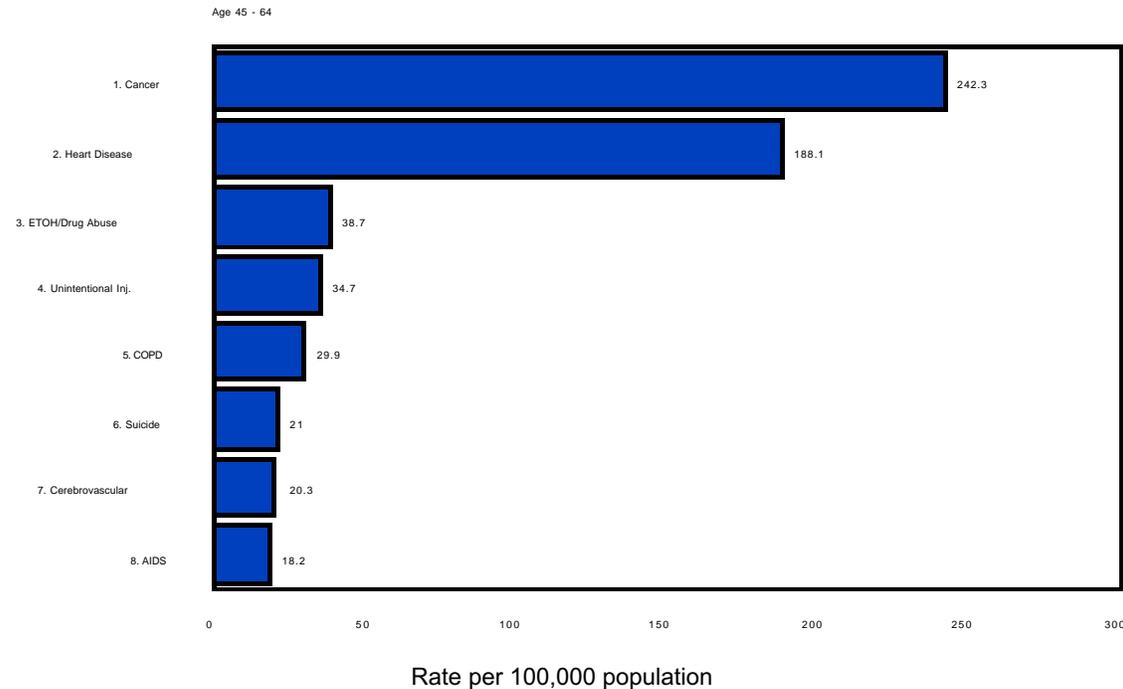
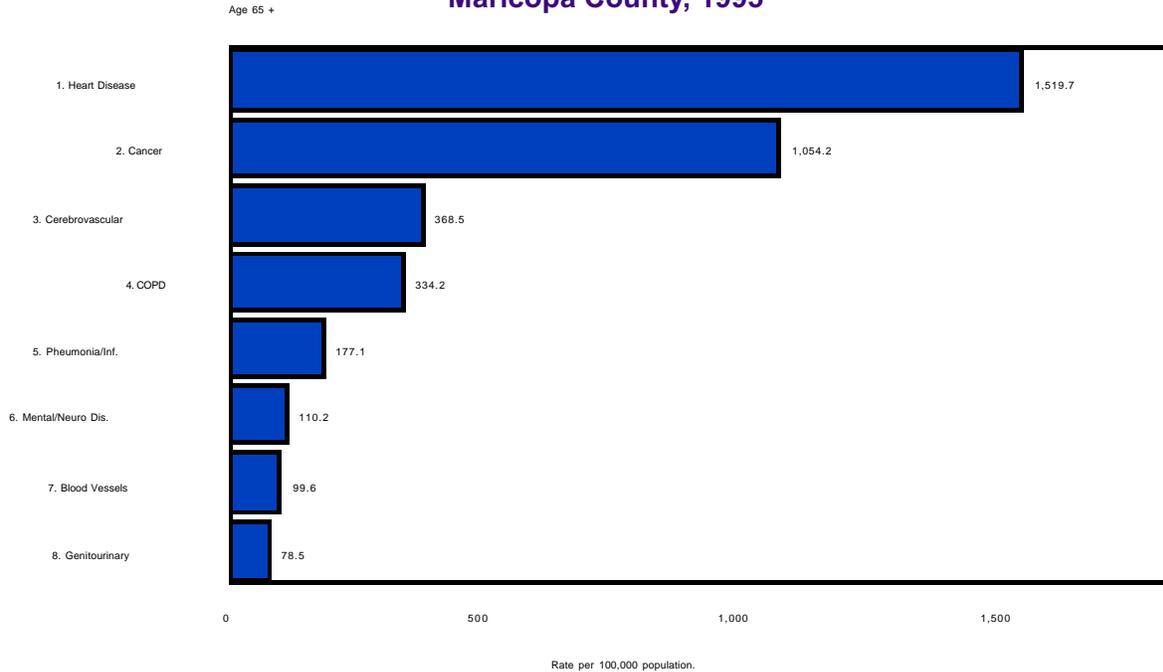


Figure 17
Leading causes of death by age (age 65+)
Maricopa County, 1995



Homicides increased sharply in 1994 and 1995 to 13.9 per 100,000 (see Figure 18). The national rate in 1993 was 10.6. The year 2000 Objective is 7.2. The rates of homicide for non residents have been relatively stable. The increases among teenagers have been acute, with adolescents showing rates three times as high as those of the general population (see Figure 19, page 16).

The mortality rates due to different types of trauma among adolescents are higher than the rates for all other ages. Figures 19-22 (pages 16-17) show death rates by age for homicides, unintentional injuries, alcohol related automobile deaths, and suicides. These causes need to be examined in the light of total mortality for minors (see Figures 23, 24 and 25, pages 18-19), especially because Arizona and Maricopa county rates are above the national ones.

Figure 18
Death rates due to homicides
All and County residents only, 1988-1995

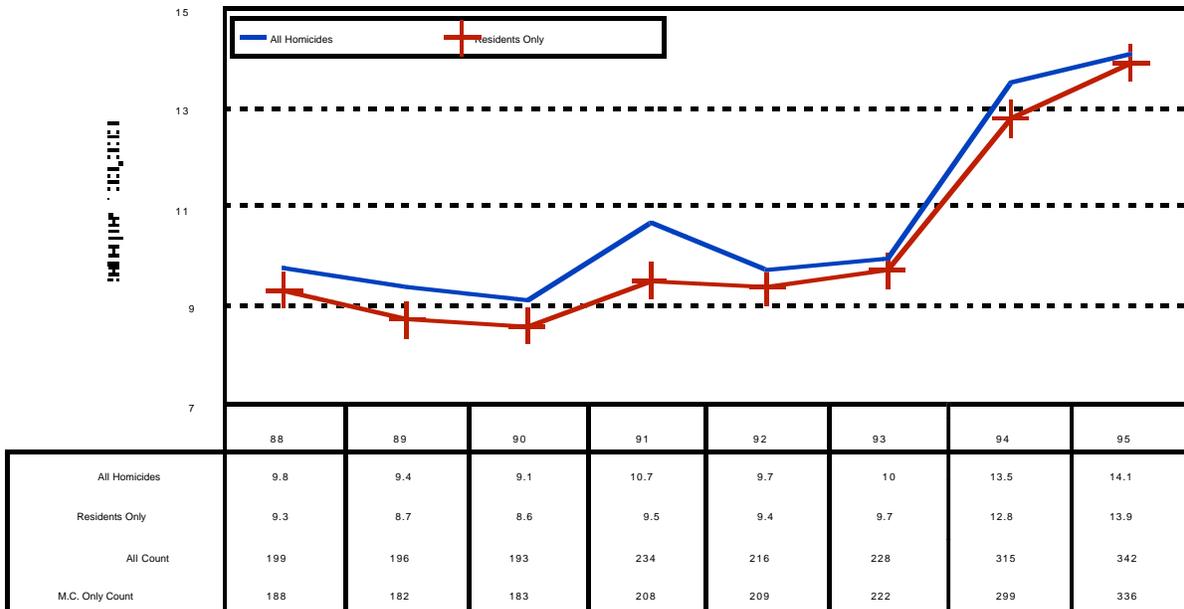


Figure 19
Adolescent (age 15-19) and County total homicide death rates
Maricopa County, 1989-1995

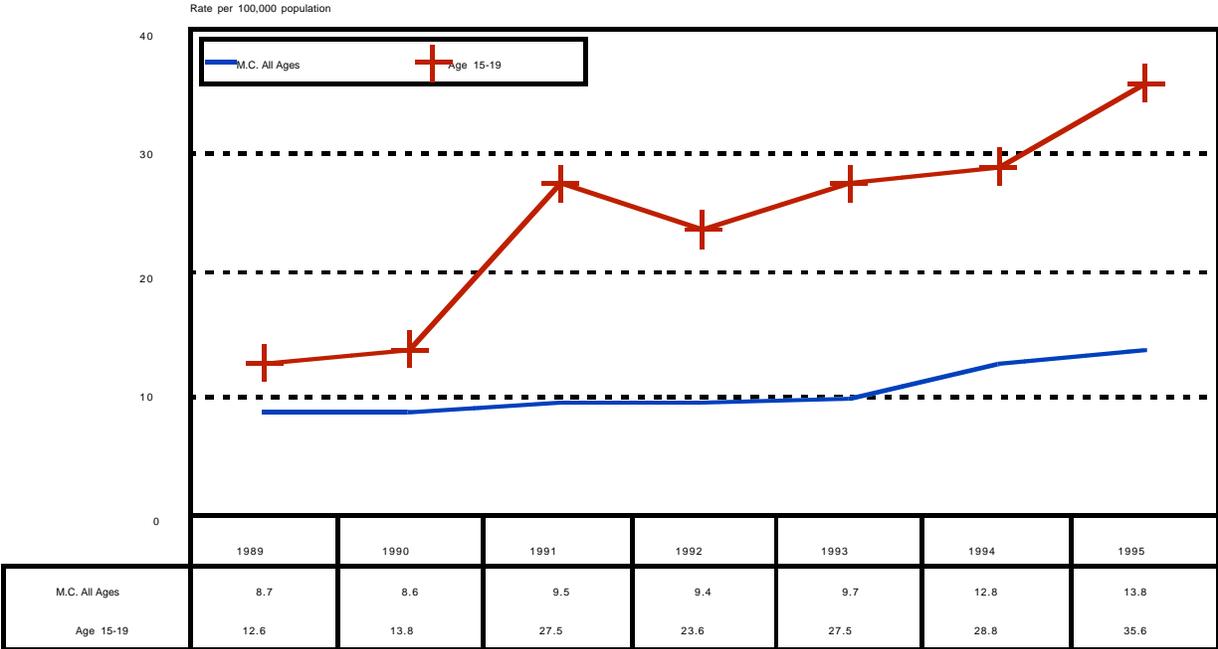


Figure 20
Adolescent (age 15-19) and total all unintentional injury death rates
Maricopa County, 1989-1995

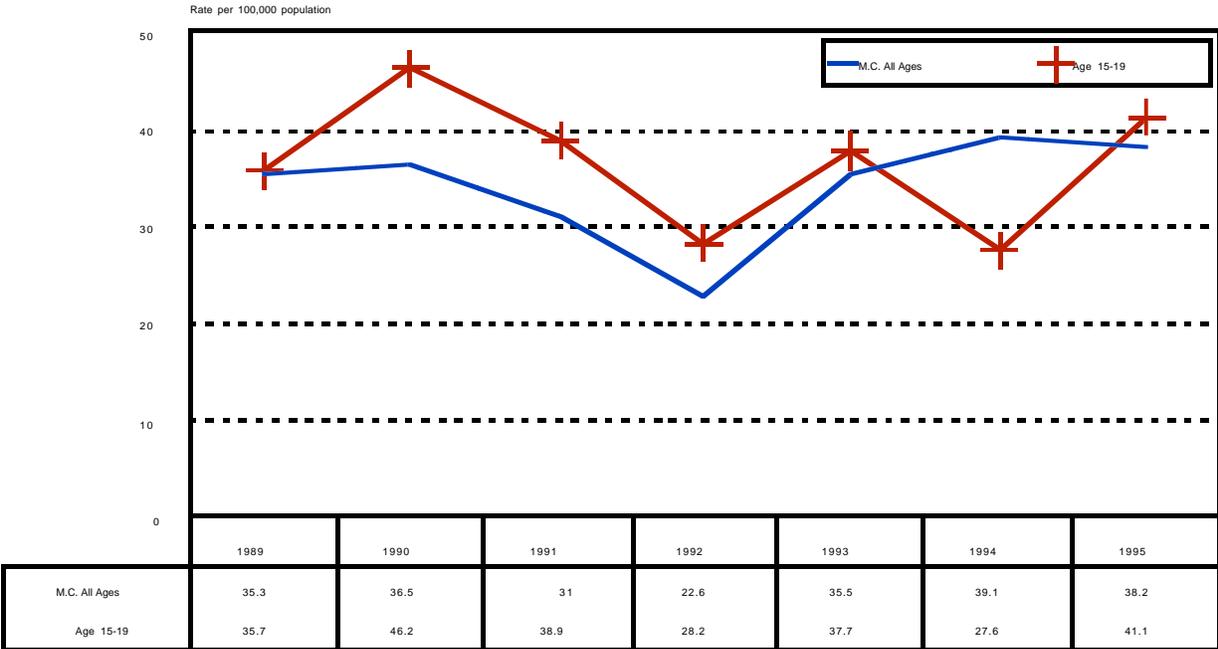


Figure 21
Adolescent (age 15-19) and total alcohol related automobile death rates
Maricopa County, 1989-1995

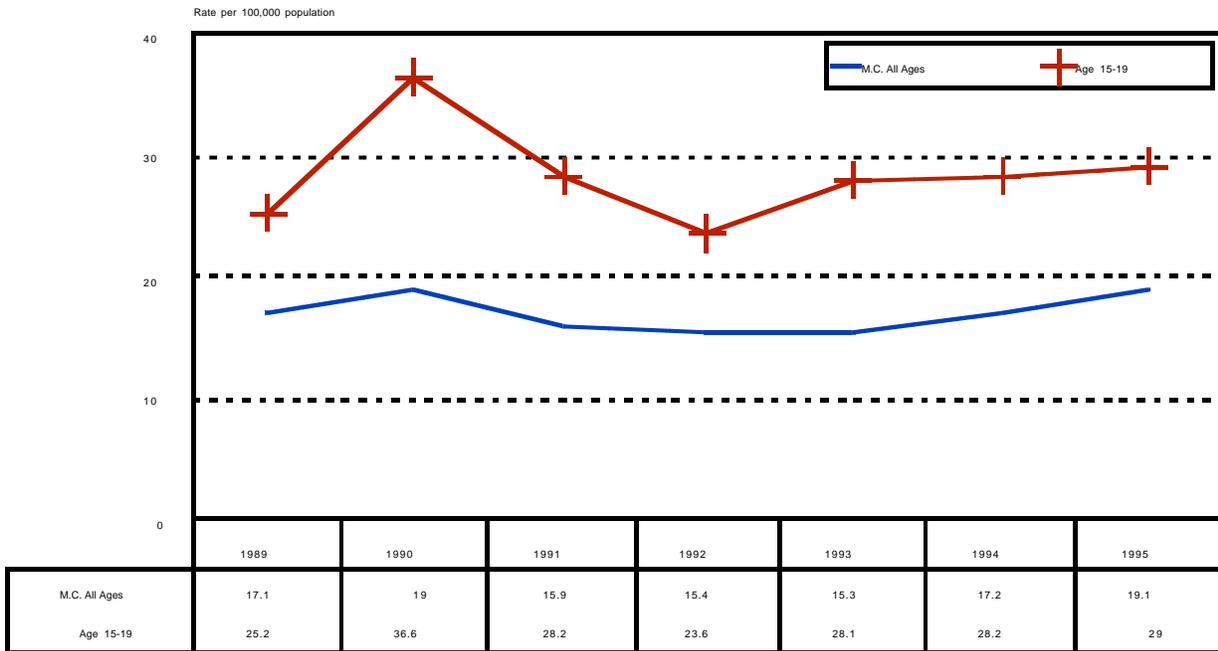


Figure 22
Adolescent (age 15-19) and total suicide death rates
Maricopa County, 1989-1995

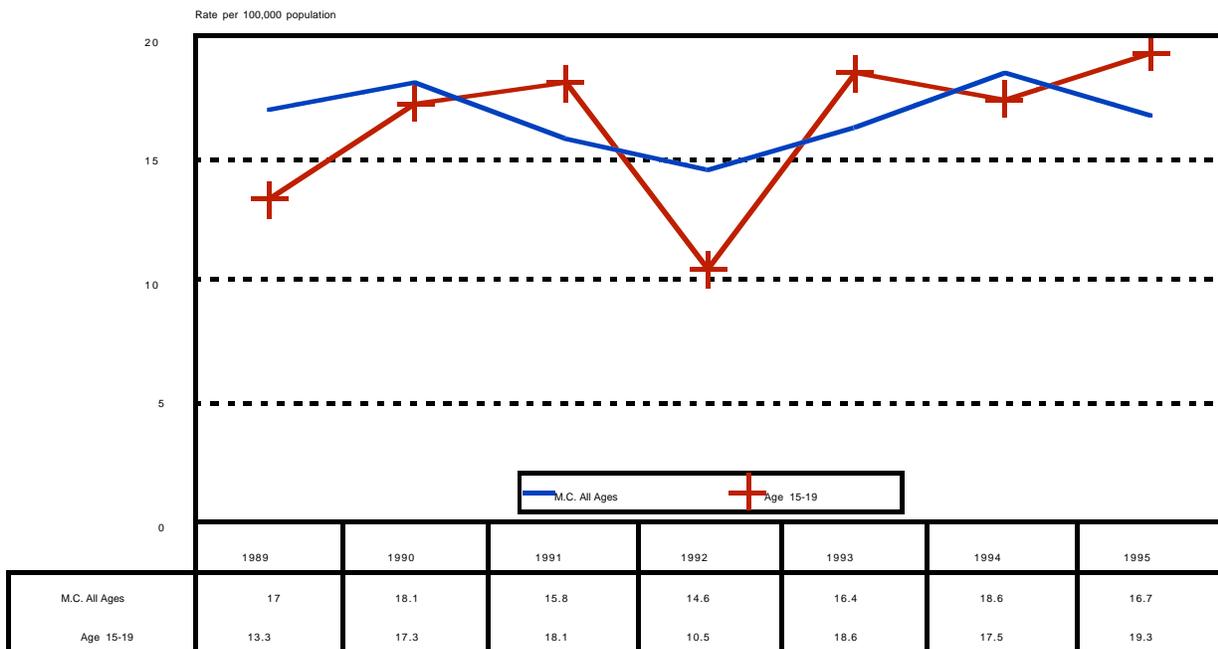
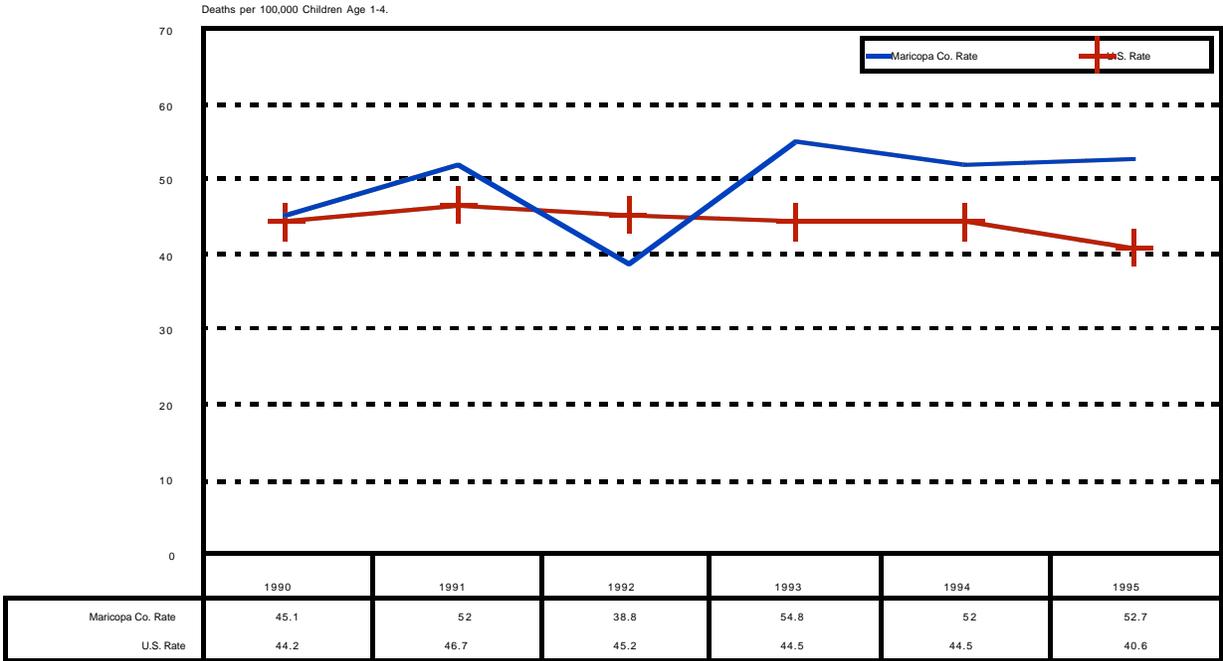
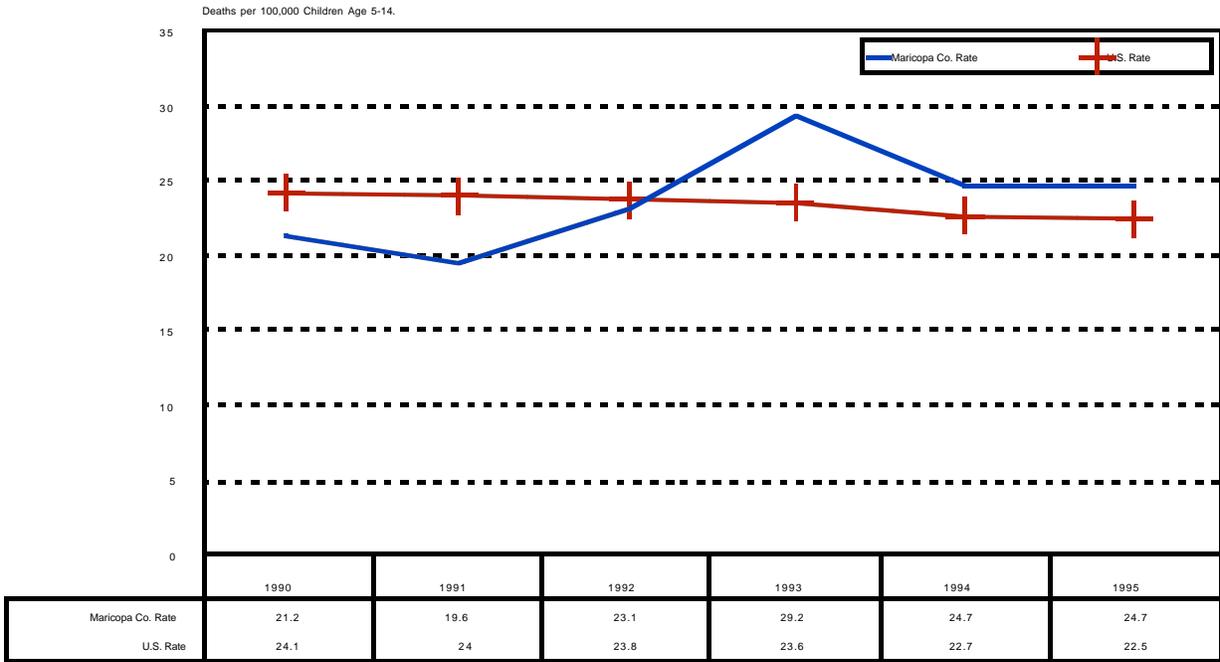


Figure 23
Childhood (age 1-4) mortality
Maricopa County and United States, 1990-1995



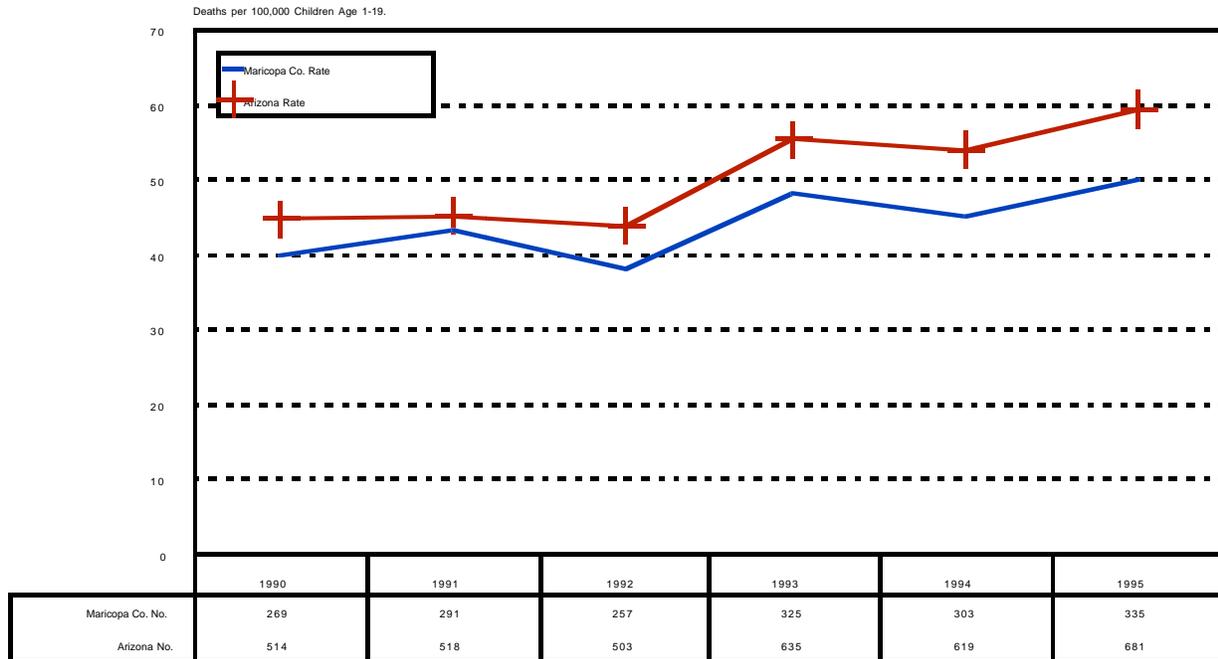
U.S. data available through 1994.

Figure 24
Childhood (age 5-14) mortality
Maricopa County, 1989-1995



U.S. data available through 1994.

Figure 25
Childhood (age 1-19) mortality
Maricopa County and Arizona, 1990-1995



Year 2000 objectives for trauma mortality are considerably lower than the county's 1995 rates:

Cause of death	MC 1995 rates (per 100,000)	Yr. 2000 Objective
Unintentional injuries	38.2	29.3
Motor vehicle (alcoh)	19.1	14.2
Motor vehicle (alcoh) adolesc.	29.0	26.8
Homicide	13.9	07.2
Suicide	16.7	10.5
Suicide (adolescents)	19.3	08.2

Figures 26 and 27 show U.S. and County mortality rates for AIDS by selected ethnicity, sex and age categories. Although the local rates generally are slightly below the national rates, the increases among minority males have followed the national pattern. Rates nationally for Native American males, however, are considerably lower (16.1 per 100,000 for those between 25 and 44 years of

age) than the local rates for all ages (24.7). The numbers, however, are small. These rates pre-date the new drug regimens beginning in 1995.

Between 15 percent and 16 percent of deaths in Maricopa County are attributable to tobacco use (see Table 8, page 21). An estimated 25 percent of the population smokes.

Figure 26
AIDS mortality rates by race/ethnicity and sex
United States, 1990 and 1994 (all ages)

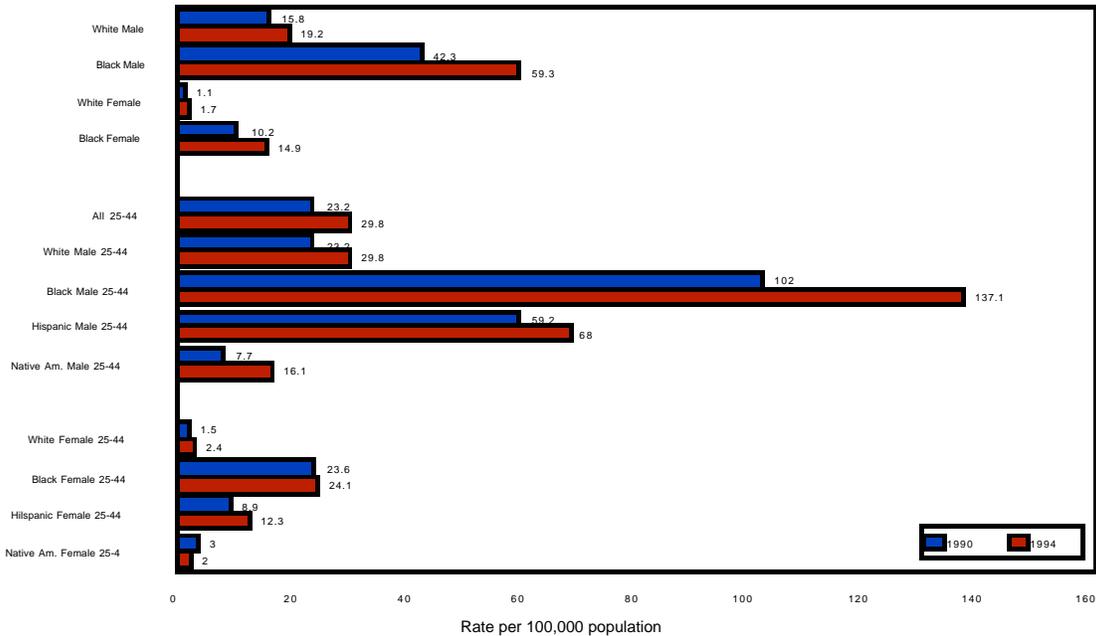


Figure 27
AIDS mortality rates by race/ethnicity and sex
Maricopa County, 1990, 1992 and 1994 (all ages)

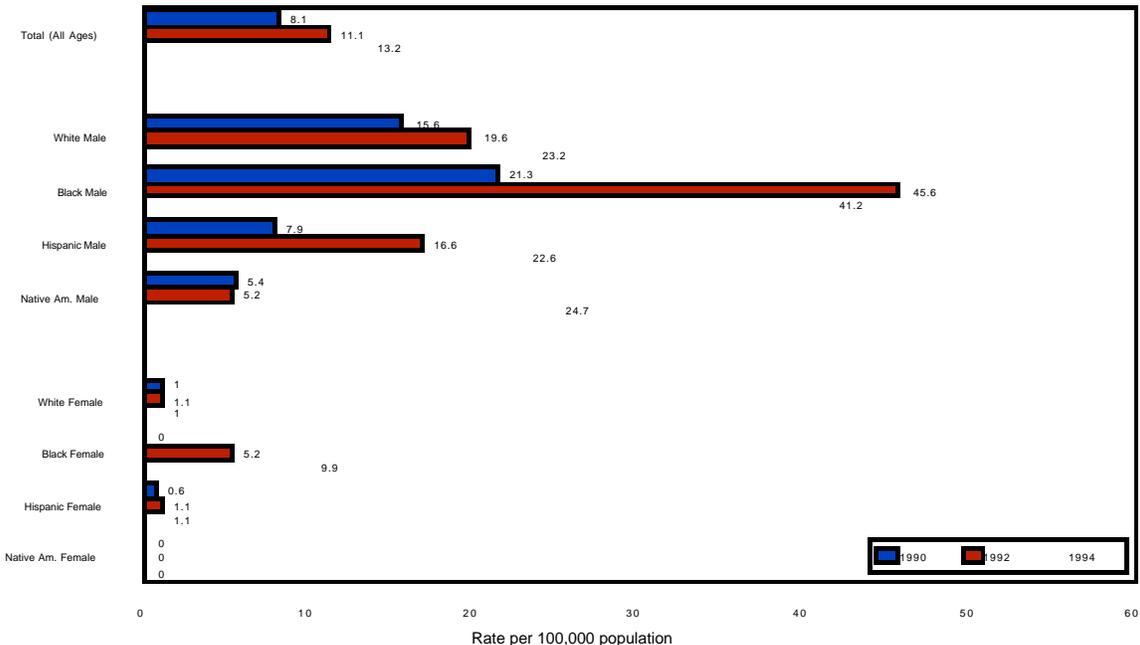


Table 8
Tobacco attributable deaths
Maricopa County, 1990-1996

Cause of Death	Year					
	1990	1991	1992	1993	1994	1995
Lung cancer (total) 87 percent tobacco related*	1,065 927	1,143 994	1,191 1,036	1,203 1,047	1,234 1,074	1,222 1,063
Coronary heart disease (total) 21 percent tobacco related*	3,991 838	3,830 804	4,008 842	4,456 936	4,517 949	4,628 972
COPD (total) 82 percent tobacco related*	874 717	898 736	928 761	1,027 842	1,038 851	1,152 944
Total tobacco related deaths (non-infant)	2,482	2,434	2,639	2,825	2,874	2,979
Infant mortality (total) 10 percent tobacco related*	358 36	334 33	343 34	317 32	333 33	324 32
Total percent of deaths tobacco related	15.9	16.0	15.6	15.6	15.3	15.6
Grand total tobacco related deaths and rate**	2,518 118.7	2,567 117.6	2,673 119.7	2,857 125.0	2,907 124.3	3,011 118.0
Deaths due to all causes and rate**	15,814 745.2	16,075 736.7	17,085 764.9	18,320 801.7	19,001 812.6	19,340 797.7

*Percent of total deaths attributable to tobacco. Health United States 1992 and Healthy People 2,000 Review.

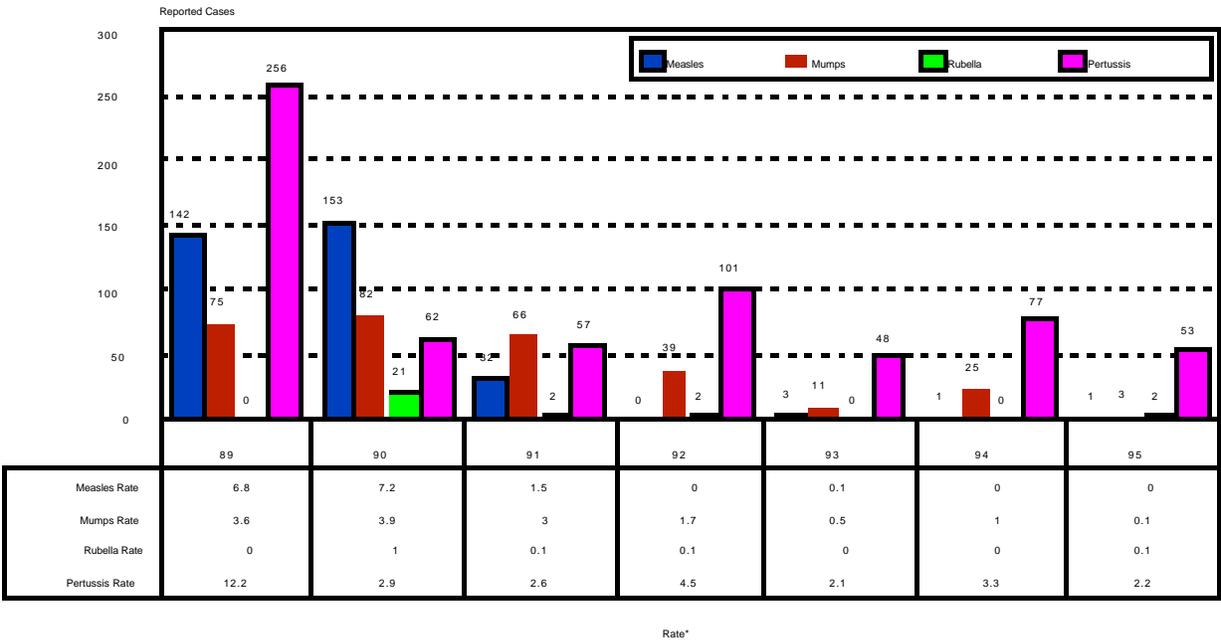
**Rate per 100,000 people, 1990 and 1995 Census and 1991-1996 population estimates.

Communicable Disease Morbidity

Reported morbidity in Maricopa County during the period 1991 to 1995 decreased for most communicable diseases. Vaccine preventable diseases decreased significantly after relatively large epidemics in 1989-1990 (see Figure 28, page 22). Haemophilus Influenza type b disease decreased dramatically after the introduction of vac-

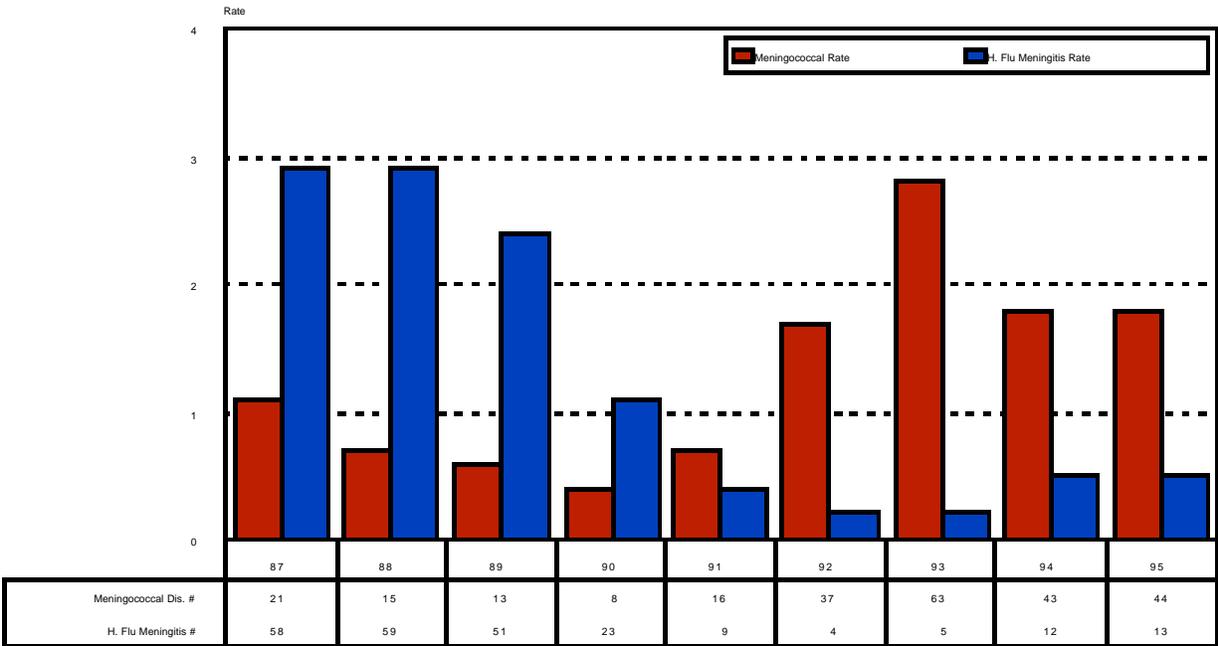
cine in the late 1980s. Meningococcal disease, serotype C, showed unprecedented increases during 1993 (see Figures 29 and 30, page 23). After an intensive community vaccination campaign for children ages two through nine in Central Phoenix, these rates began to decrease, returning to the usual endemic levels in 1996.

Figure 28
Incidence and rates* of vaccine preventable disease
Maricopa County, 1989-1995



*Per 100,000 population DES population estimates.

Figure 29
Meningitis cases and case rates*
(Meningococcal disease and H. Influenzae Meningitis)
Maricopa County, 1987-1995



*Per 100,000 population DES population estimates.

Syphilis and gonorrhea rates have decreased since 1990, with syphilis showing a slight increase in 1995. This increase continued during 1996 and 1997. Both chlamydia

and gonorrhea rates have shown much higher rates among teenagers than among adults. Chlamydia rates have not decreased during this period (see Figures 32-34).

Figure 32
Syphilis rates by selected age groups
Maricopa County, 1989-1995

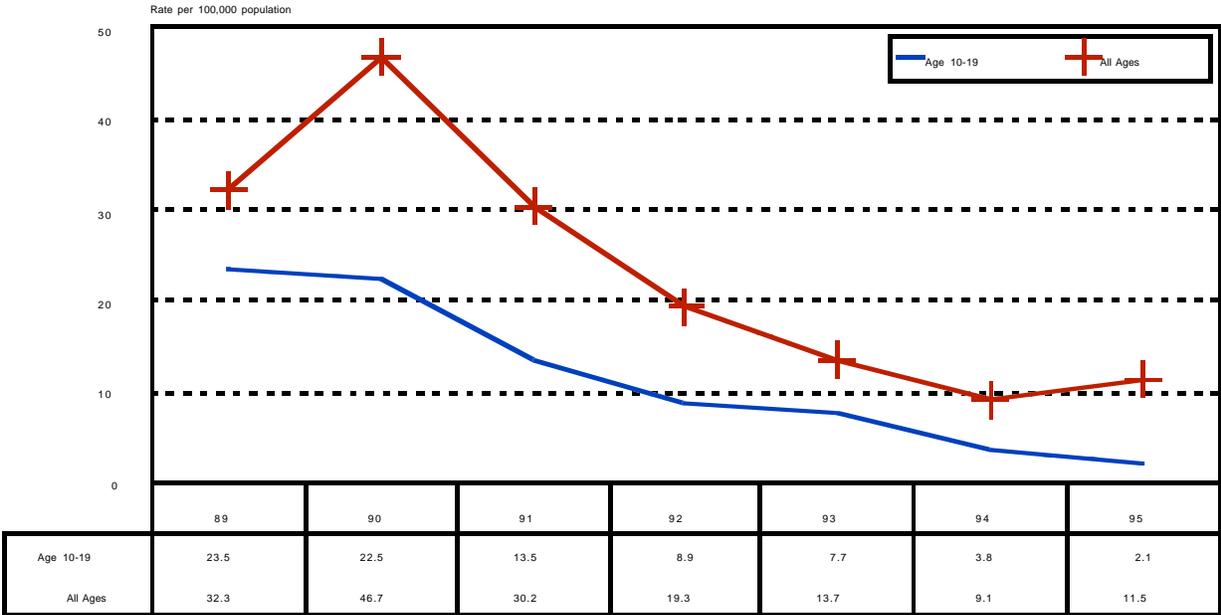


Figure 33
Gonorrhea rates by selected age groups
Maricopa County, 1989-1995

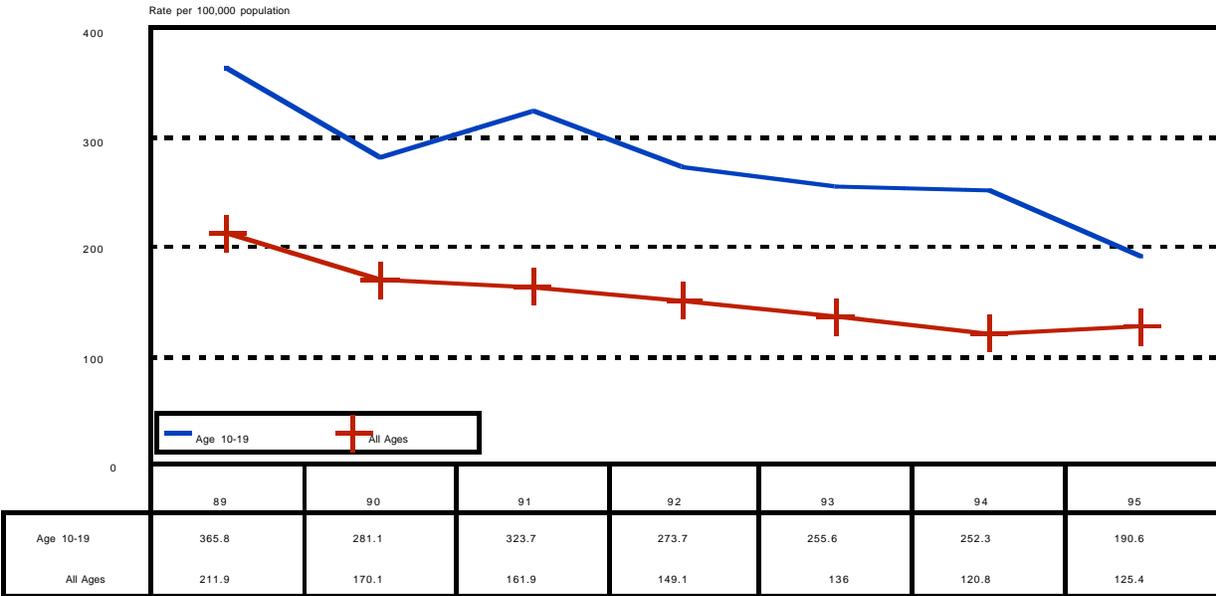
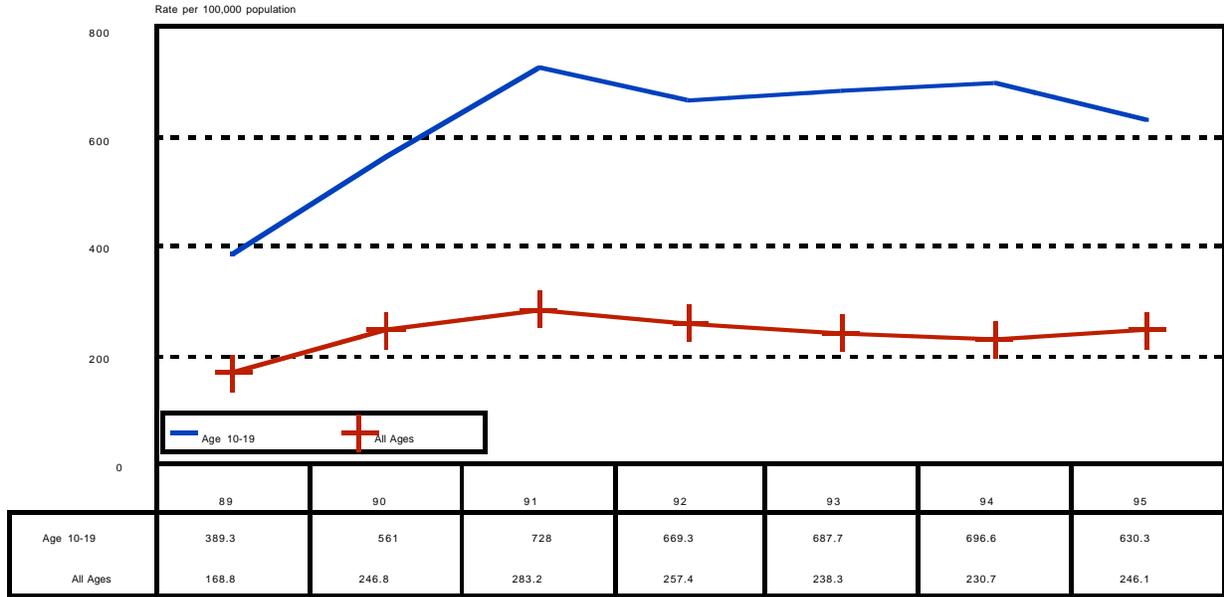


Figure 34
Chlamydia rates by selected age groups
Maricopa County, 1989-1995



Surveillance data for self-limiting diseases not preventable by vaccine, such as Hepatitis A and enteric infections are incomplete for the period 1992 - 1995, due to reductions in

surveillance staff. It is not possible to unequivocally state that the reductions observed in the rates are real rather than artifactual (see tables 9a, page 26, and 9b, page 27).

Table 9a
General communicable diseases
diagnoses by year, 1987-1991

	1987		1988		1989		1990		1991	
	#	Rate								
Enteric Diseases	2148	108.7	2159	106.3	2007	96.0	2428	114.5	1830	83.9
Amebiasis	36	1.8	28	1.4	27	1.3	20	0.9	55	2.5
Cholera	0	0	0	0	0	0	0	0	0	0
Campylobacteriosis	384	19.4	413	20.3	421	20.1	495	23.3	419	19.2
Giardiasis	802	40.6	763	37.5	746	35.7	659	31.1	447	20.5
Salmonellosis	297	15.0	307	15.1	319	15.3	389	18.3	368	16.9
Shigellosis	625	31.6	644	31.7	490	23.4	840	39.6	528	24.2
Typhoid fever	1	0.1	4	0.2	4	0.2	16	0.8	4	0.2
Other	3	0.2	0	0	0	0	10	0.5	9	0.4
Vaccine Preventable	210	10.6	503	24.8	538	25.7	361	17.0	188	8.6
Measles	0	0	5	0.2	142	6.8	154	7.3	46	2.1
Mumps	97	4.9	102	5.0	75	3.6	82	3.9	66	3.0
Pertussis	21	1.1	297	14.6	240	11.5	63	3.0	57	2.6
Rubella	4	0.2	0	0	0	0	21	1.0	2	0.1
Other Vaccine Preventable	0	0	0	0	0	0	0	0	0	0
Other	88	4.5	99	4.9	81	3.9	41	1.9	17	0.8
Central Nervous System	256	13.0	169	8.3	146	7.0	202	9.5	108	4.9
Aseptic meningitis	131	6.6	56	2.8	52	2.5	132	6.2	53	2.4
Primary enceph	10	0.5	9	0.4	4	0.2	6	0.3	5	0.2
Post-viral enceph	1	0.1	1	*** *	0	0	0	0	1	*** *
Meningococcal meningitis	13	0.7	8	0.4	10	0.5	5	0.2	10	0.5
Haemophilus infl. mening.	56	2.8	58	2.9	50	2.4	23	1.1	9	0.4
Other bacterial meningitis	24	1.2	16	0.8	15	0.7	17	0.8	11	0.5
Other	21	1.1	21	1.0	15	0.9	19	0.9	19	0.9
Viral Hepatitis	2131	107.8	1863	91.7	2000	95.7	1233	58.1	828	37.9
Hepatitis A	1381	69.9	1371	67.5	1557	74.5	843	39.7	722	33.1
Hepatitis B	618	31.3	425	20.9	388	18.6	334	15.7	81	3.7
Hepatitis Non-A,B	117	5.9	60	3.0	43	2.1	51	2.4	7	0.3
Other	15	0.8	7	0.3	12	0.6	5	0.2	18	0.8
Zoonoses	20	1.0	24	1.2	15	0.7	18	0.8	14	0.6
Coccidioidomycosis	154	7.8	162	8.0	173	8.3	155	7.3	210	9.6
All other conditions	13	0.7	34	1.7	34	1.6	22	1.0	33	1.5
Total Acute diseases	4932	249.5	4914	241.8	4913	235.1	4420	208.3	3211	147.2

Rates are per 100,000 estimated population based on DES projections and 1990 Census.

Table 9b
General communicable diseases
diagnoses by year, 1992-1995

	1992		1993		1994		1995	
	#	Rate	#	Rate	#	Rate	#	Rate
Enteric Diseases	1641	71.8	1183	50.6	1032	44.1	1408	55.2
Amebiasis	74	3.2	55	2.4	41	1.8	51	2.1
Cholera	0	0	0	0	0	0	0	0
Campylobacteriosis	418	18.3	314	13.4	247	10.6	284	11.7
Giardiasis	404	17.7	284	12.2	247	10.6	243	10.0
Salmonellosis	326	14.4	218	9.3	219	9.4	291	12.1
Shigellosis	416	18.2	309	13.2	273	11.7	517	21.4
Typhoid fever	1	0.1	1	0.1	1	0.1	3	0.1
Other	2	0.1	2	0.1	4	0.2	19	0.7
Vaccine Preventable	142	6.7	60	3.1	103	4.4	80	3.3
Measles	0	0	3	0.1	1	0.1	1	0.1
Mumps	39	1.7	11	0.5	25	1.1	19	0.7
Pertussis	101	4.4	46	2.0	77	3.3	56	2.3
Rubella	2	0.1	0	0	0	0	3	0.1
Other Vaccine Preventable	0	0	0	0	0	0	1	0.1
Other	0	0	0	0	0	0	0	0
Central Nervous System	112	4.9	199	8.6	108	4.6	131	5.1
Aseptic meningitis	79	3.5	126	5.4	53	2.3	63	2.7
Primary enceph	2	0.1	3	0.1	0	0	3	0.1
Post-viral enceph	0	0	0	0	0	0	1	0.1
Meningococcal meningitis	17	0.7	63	2.7	43	1.8	39	1.7
Haemophilus infl. meningitis	4	0.2	5	0.2	12	0.5	2	0.1
Other bacterial meningitis	0	0	1	0.1	0	0	12	0.5
Other	10	0.5	1	0.1	0	0	11	0.4
Viral Hepatitis	930	40.7	565	24.2	676	28.9	666	27.8
Hepatitis A	819	35.8	532	22.8	636	27.2	566	23.4
Hepatitis B	104	4.6	28	1.2	37	1.6	61	2.5
Hepatitis Non-A,B	3	0.1	3	0.1	0	0	36	1.5
Other	4	0.2	2	0.1	3	0.1	3	0.1
Zoonoses	16	0.7	3	0.1	20	1.0	18	0.7
Coccidioidomycosis	294	12.9	316	13.5	310	13.3	398	15.6
All other conditions	28	1.8	22	1.0	56	2.2	350	13.7
Total Acute diseases	3163	139.4	2348	101.3	2305	98.5	3051	127.1

Rates are per 100,000 estimated population based on DES projections and 1990 Census.

Tables 10 and 11 (pages 29-30) show year 2000 Objectives and rates for the county for most sexually transmitted diseases, including AIDS. The rates in Maricopa County are below both the current national rates and year 2,000 objectives. One notable exception is chlamydia.

Table 10
Year 2000 Objectives to reduce sexually transmitted diseases
Maricopa County rates by year of diagnosis, 1987-1995

Objective Number	Year 2000 National Objectives	Maricopa County crude morbidity rates per 100,000								
		87	88	89	90	91	92	93	94	95
18.0	Reduce the incidence of AIDS to no more than 43.0 cases per 100,000	11.3	13.0	17.8	18.6	18.6	22.3	18.9	15.9	13.9
19.1	Reduce gonorrhea to an incidence of no more than 225 cases per 100,000	203.2	180.9	193.5	155.3	142.5	149.2	135.9	120.8	125.4
19.1a	among Blacks $\leq 1,990/100,000$	2200.0	2155.4	2600.6	1880.0	1908.6	1847.4	1566.8	1324.2	1058.2
19.1b	among Adolescents aged 15-19 $\leq 1,123/100,000$	705.0	580.9	702.6	502.2	561.1	386.5	284.5	490.1	351.1
19.2	Reduce Chlamydia trachomatis infections, as measured by a decrease in the incidence of nongonococcal urethritis to $\leq 170/100,000$	50.8	91.1	141.2	217.4	239.7	257.6	237.8	230.7	233.9
19.3	Reduce primary and secondary syphilis to an incidence of $\leq 10/100,000$	8.5	4.4	15.0	23.7	12.2	6.5	2.3	1.3	1.7
19.3a	among Blacks $\leq 188/100,000$	68.9	35.6	217.4	274.6	112.4	61.7	15.1	11.1	29.2
19.4	Reduce congenital syphilis to an incidence of $\leq 50/100,000$	0.0	0.0	28.1	62.1	40.1	47.4	19.8	30.7	13.6

Table 11a
Maricopa County incidence of reported cases
of sexually transmitted diseases and AIDS, 1987-1991

Count and rate by year of diagnosis

Disease	1987		1988		1989		1990		1991	
	#	Rate	#	Rate	#	Rate	#	Rate	#	Rate
Total Syphilis	482	24.4	404	19.9	625	29.9	932	43.9	627	28.7
Congenital Syphilis	0	0.0	0	0.0	11	0.5	25	1.2	16	0.7
Primary Syphilis	87	4.4	49	2.4	175	8.4	298	14.0	160	7.3
Secondary Syphilis	82	4.1	40	2.0	138	6.6	206	9.7	106	4.9
Other Syphilis	313	15.8	315	15.5	301	14.4	403	19.0	345	15.8
Gonorrhea	4016	203.2	3675	180.9	4043	193.5	3295	155.3	3109	142.5
Chlamydia	1004	50.8	1851	91.1	2950	141.2	4614	217.4	5231	239.7
Herpes Genitalis	894	45.2	833	41.0	919	44.0	1123	52.9	1085	49.7
Urethritis	1824	92.3	2019	99.4	1596	76.4	1860	87.6	2012	92.2
Vaginitis	889	45.0	1053	51.8	1024	49.0	1557	73.4	1107	50.7
Other	88	4.5	145	7.3	188	9.0	352	16.7	336	15.4
Total STD's	9197	465.3	9980	491.1	11345	542.8	13773	647.1	13507	619.0
AIDS	224	11.2	264	13.2	371	18.6	394	18.8	406	18.8

Rates are per 100,000 estimated population based on DES projections and 1990 and 1995 Census.

Table 11b
Maricopa County incidence of reported cases
of sexually transmitted diseases and AIDS, 1992-1995

Count and rate by year of diagnosis

Disease	1992		1993		1994		1995	
	#	Rate	#	Rate	#	Rate	#	Rate
Total Syphilis	431	19.3	320	12.0	214	8.6	279	11.2
Congenital Syphilis	19	0.9	8	0.3	13	0.6	6	0.2
Primary Syphilis	70	3.1	21	0.9	20	0.9	30	1.2
Secondary Syphilis	76	3.4	32	1.4	10	0.4	14	0.5
Other Syphilis	266	11.9	259	11.3	171	7.3	229	9.0
Gonorrhea	3332	149.2	3113	135.9	2825	120.8	3201	125.4
Chlamydia	5753	257.6	5449	237.8	5395	230.7	5968	233.9
Herpes Genitalis	1239	55.5	1085	47.4	1200	51.3	1566	61.4
Urethritis	2346	105.0	1288	56.2	7	0.3	6	0.2
Vaginitis	1086	48.6	552	24.1	229	9.8	12	0.5
Other	80	3.6	82	3.6	33	1.4	199	7.8
Total STD's	14267	631.8	11889	570.1	9903	424.4	11231	449.2
AIDS	499	22.3	433	18.9	354	15.9	337	13.9

Rates are per 100,000 estimated population based on DES projections and 1990 and 1995 Census.

Behavioral risk factors

The data to measure these risk factors comes from the Behavioral Risk Factor Survey, a national survey sponsored by the CDC. Unfortunately, the sample sizes are designed for statewide estimates and not for specific county estimates.

Until 1992, Maricopa County sponsored its own Behavioral Risk Factor Survey. After that year, due to budget cuts, it has not been repeated. The data presented here are the results of the 1991 survey. The estimates for 1992 were not significantly different from 1991.

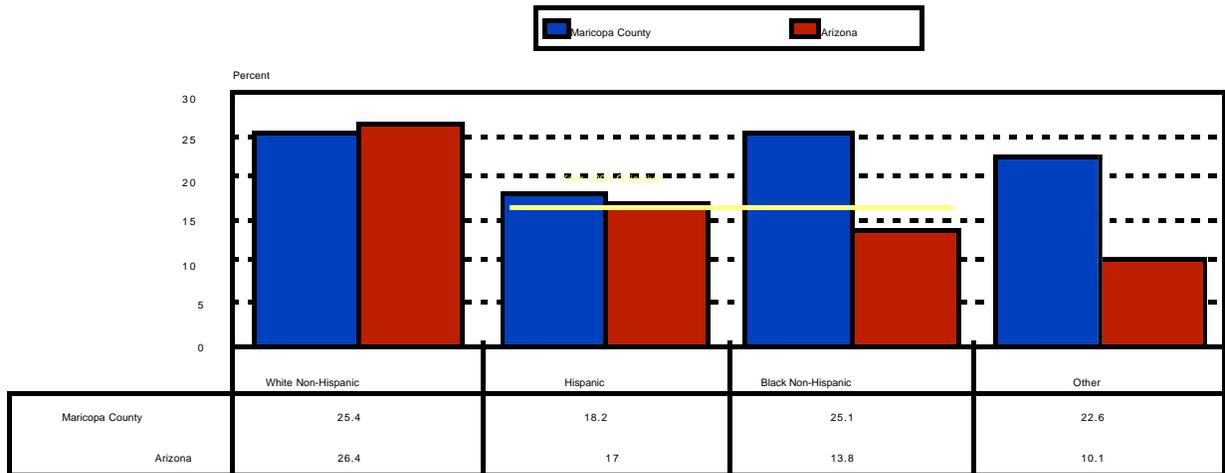
The response rate of the survey was more than 80 percent and the geographic distribution was repre-

sentative of county population. These data are consistent with other sources and surveys, the CDC has validated the questionnaire and the results show high reliability.

Smoking

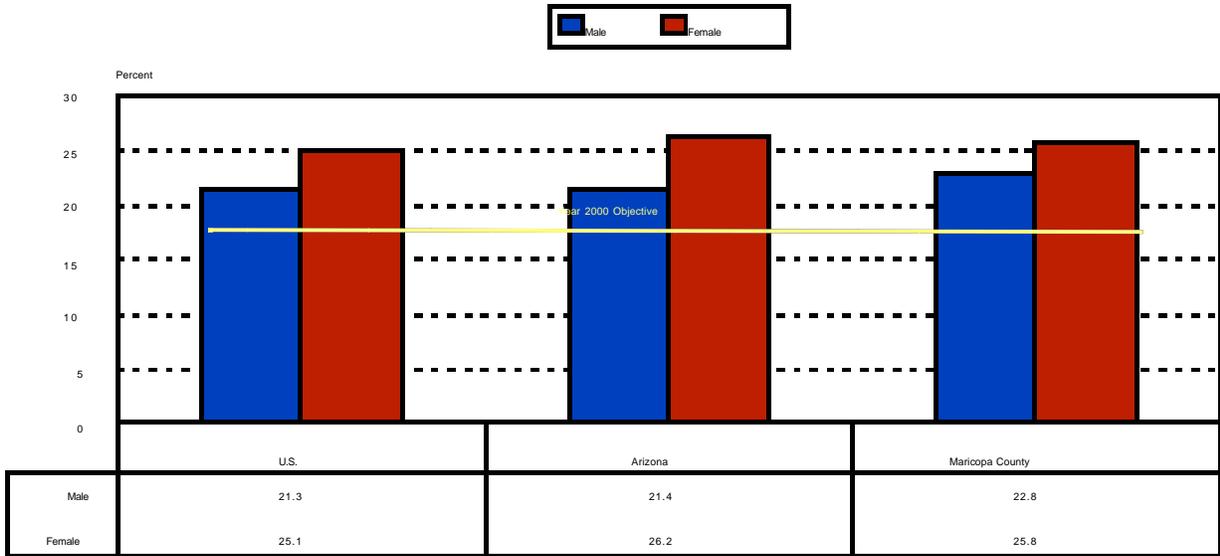
Figures 35 through 41 show the distribution of smokers by different population characteristics. Non-Hispanic Whites, males, middle aged people and those with lower income and education were the groups with the highest prevalence of smoking. Hispanic mothers smoked during pregnancy at a rate two thirds lower than other mothers did. These data should help focus some of the tobacco reduction activities in the county.

Figure 35
Maricopa County behavioral risk factor surveillance 1991
percent current smokers by ethnicity for Maricopa County and Arizona



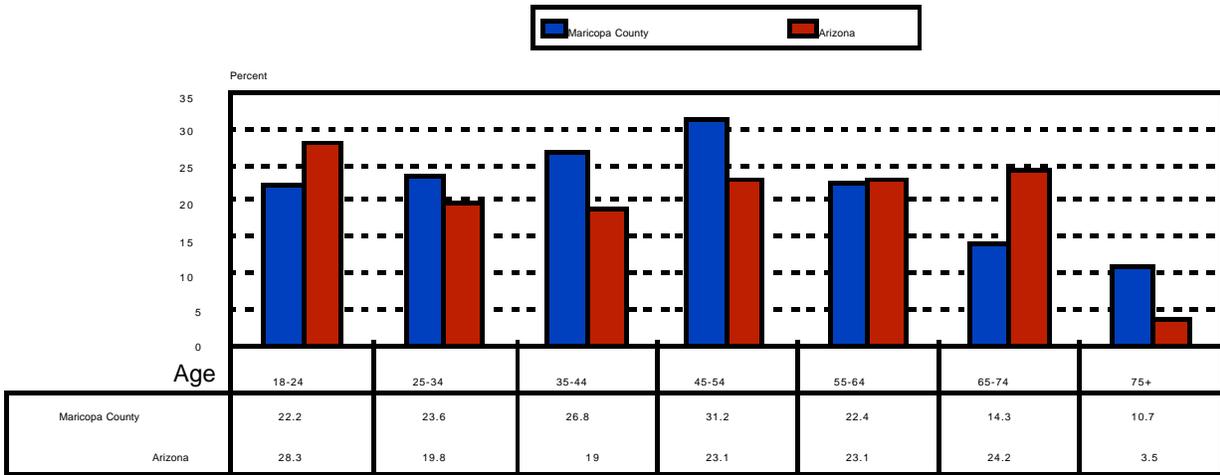
Based on a sample of 1,444, weighted by age, sex and ethnicity to Maricopa County 1990 census population. Other = Asian, Native American and unknown

Figure 36
Maricopa County behavioral risk factor surveillance 1991
percent current smokers by sex for U.S., Arizona and Maricopa County



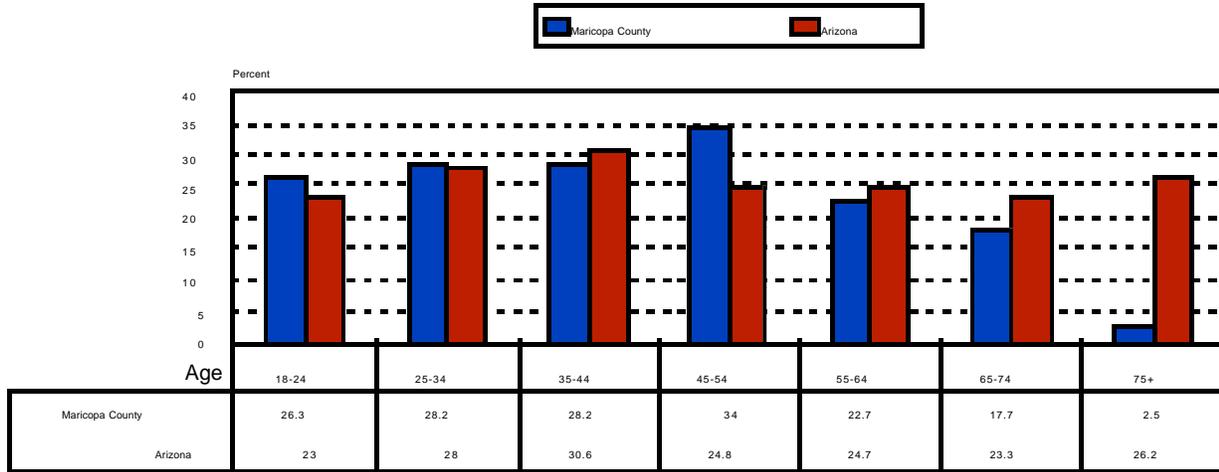
Based on a sample of 1,444, weighted by age, sex and ethnicity to Maricopa County 1990 census population.

Figure 37
Maricopa County behavioral risk factor surveillance 1991
percent current smokers among females of Maricopa County and Arizona



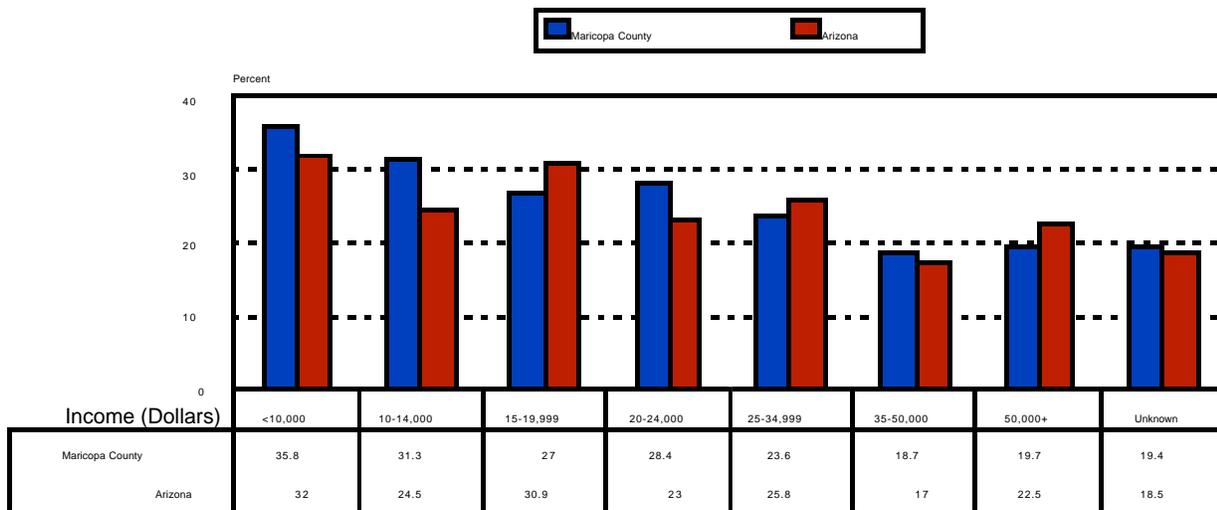
Based on a sample of 1,444, weighted by age, sex and ethnicity to Maricopa County 1990 census population.
Current smokers among unknowns of Maricopa County = 14.7 percent, of Arizona = 42.9 percent

Figure 38
Maricopa County behavioral risk factor surveillance 1991
percent current smokers among males of Maricopa County and Arizona



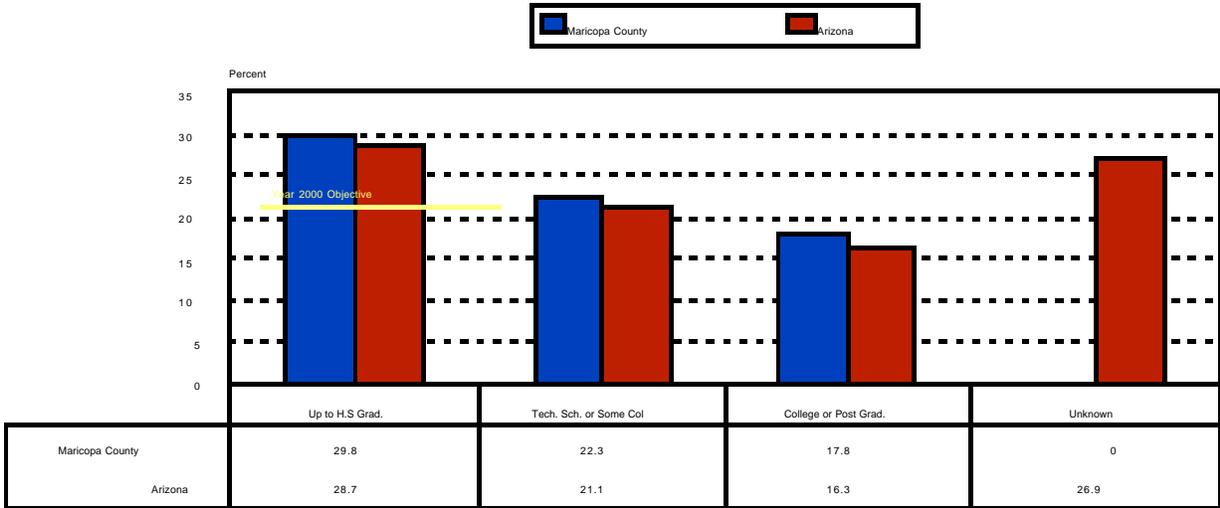
*Based on a sample of 1,444, weighted by age, sex and ethnicity to Maricopa County 1990 census population.
 Current smokers among unknowns of Arizona = 10.7 percent*

Figure 39
Maricopa County behavioral risk factor surveillance 1991
percent current smokers by income for Maricopa County and Arizona



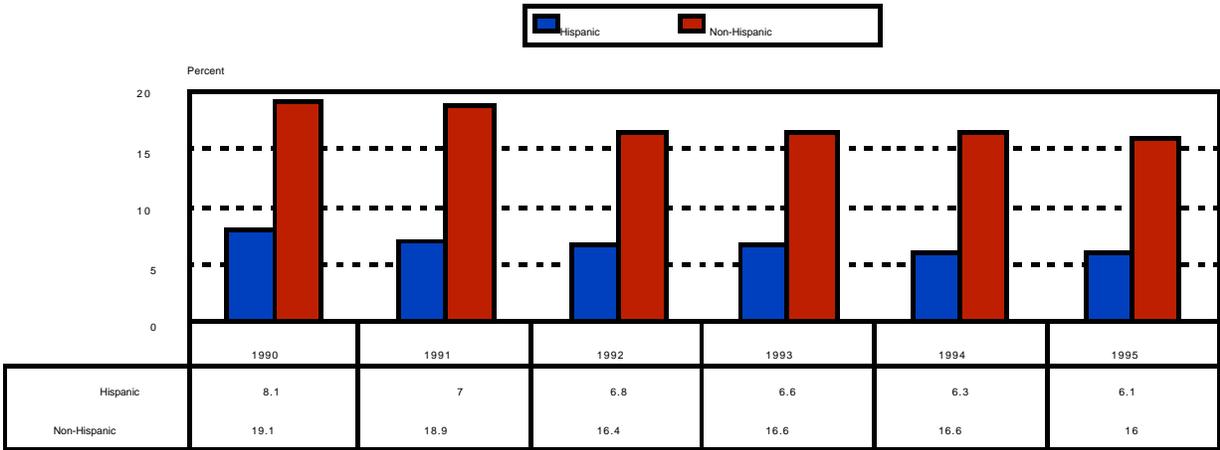
Based on a sample of 1,444, weighted by age, sex and ethnicity to Maricopa County 1990 census population.

Figure 40
Maricopa County behavioral risk factor surveillance 1991
percent current smokers by educational status for Maricopa County and Arizona



Based on a sample of 1,444, weighted by age, sex and ethnicity to Maricopa County 1990 census population.

Figure 41
Percentage of mothers who smoked during pregnancy
Maricopa County, 1990-1995



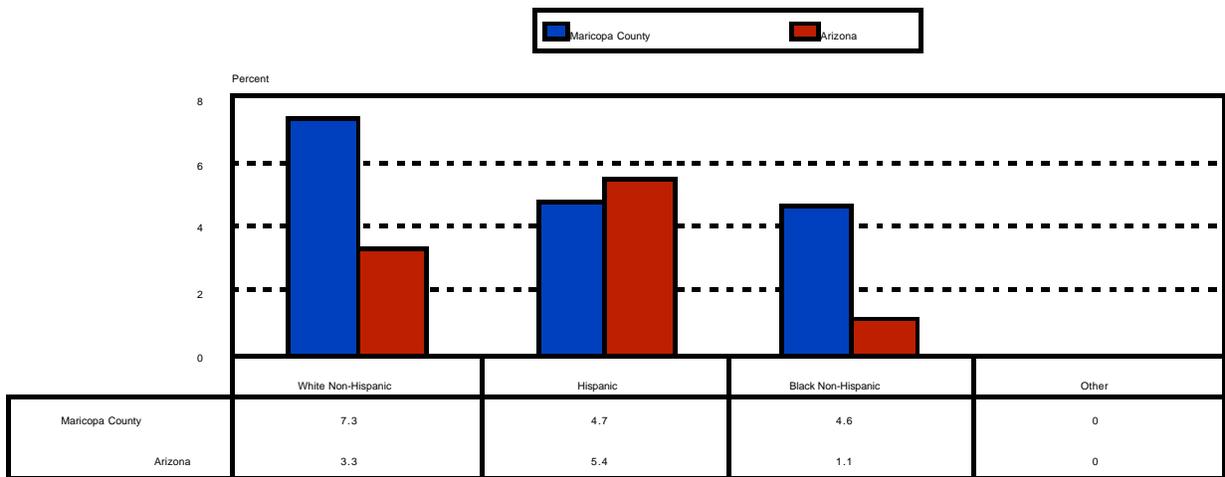
*Source: Maricopa County Department of Public Health
 Division of Epidemiology and Data Services*

Drinking

Figures 42 through 50 show data on chronic and binge drinking as well as drinking and driving. The patterns for these three activities are not the same. Whites have the largest percentage of chronic drinkers, Blacks and Hispanics have the largest percentages of binge drinkers. The highest prevalence of people who drink and drive are in the “other” category, the majority of whom in the Maricopa County survey are Native Americans. This cor-

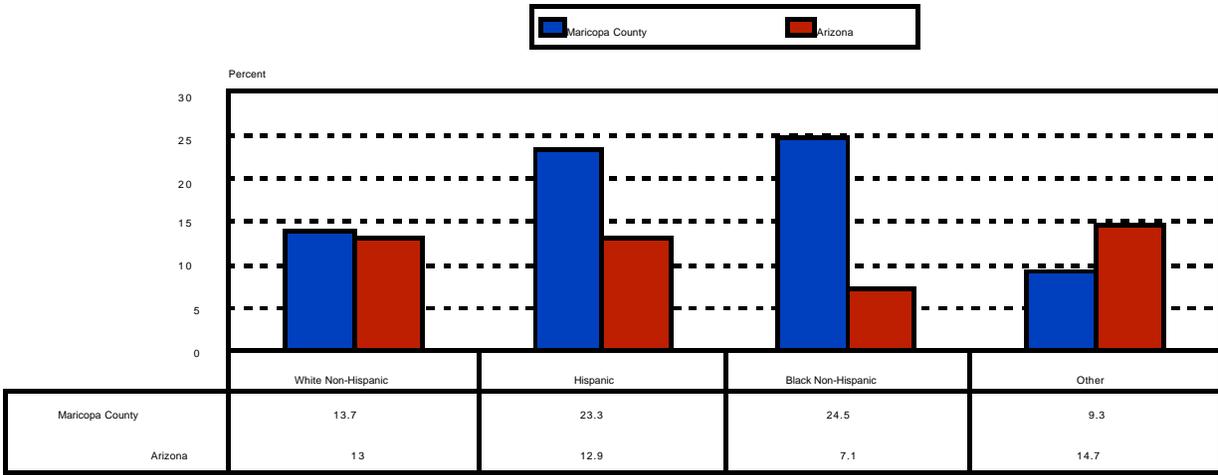
relates well with death rates from automobile accidents with alcohol involvement. Males drink and drive and engage in chronic and binge drinking about three times as often as females. An interesting pattern is the U-shaped curve of female chronic drinkers in Maricopa County, showing higher prevalence of chronic drinking at ages 25 and younger and 65 and older. Males don’t show this pattern. The unemployed and the retired are more likely to be chronic drinkers.

Figure 42
Maricopa County behavioral risk factor surveillance 1991
percent chronic drinking by race/ethnicity for Maricopa County and Arizona



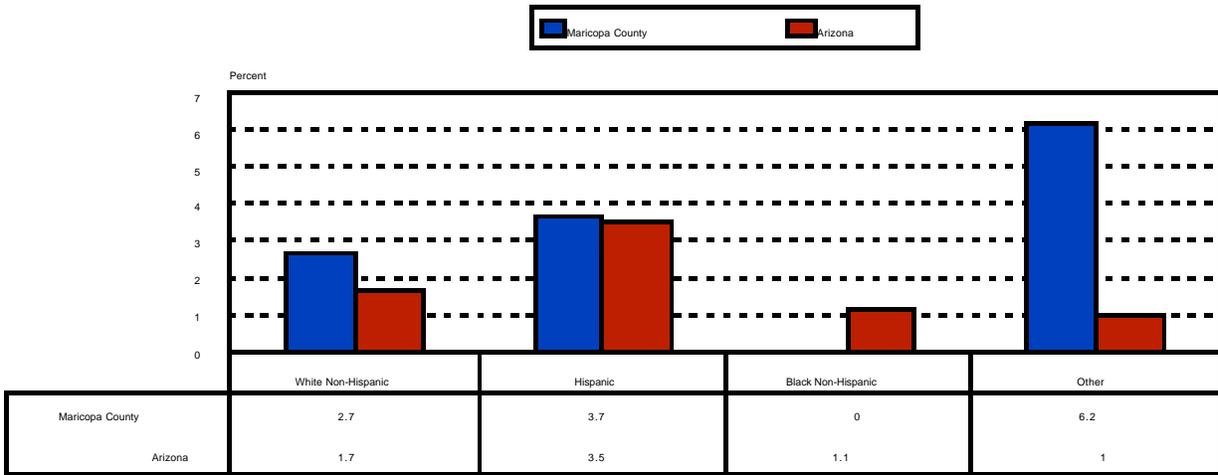
*Based on a sample of 1,444, weighted by age, sex and ethnicity to Maricopa County 1990 census.
 Other = Asian, Native America and unknown*

Figure 43
Maricopa County behavioral risk factor surveillance 1991
percent binge drinking by race/ethnicity for Maricopa County and Arizona



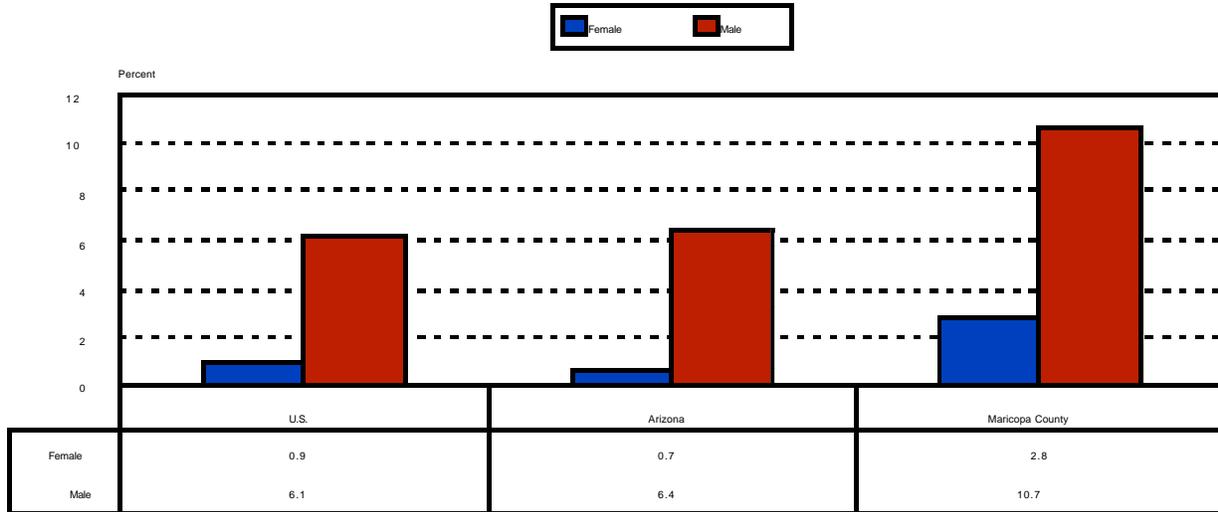
*Based on a sample of 1,444, weighted by age, sex and ethnicity to Maricopa County 1990 census population.
 Other = Asian, Native American and unknown*

Figure 44
Maricopa County behavioral risk factor surveillance 1991
percent drinking and driving by ethnicity for Maricopa County and Arizona



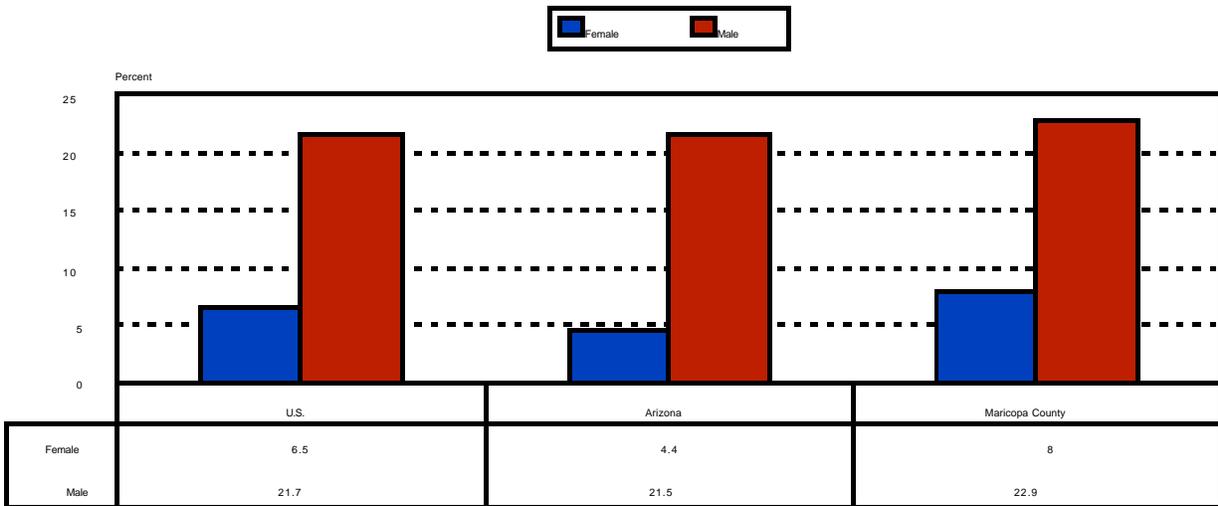
*Based on a sample of 1,444, weighted by age, sex and ethnicity to Maricopa County 1990 census population.
 Other = Asian, Native American and unknown*

Figure 45
Maricopa County behavioral risk factor surveillance 1991
percent chronic drinking by sex for U.S., Maricopa County and Arizona



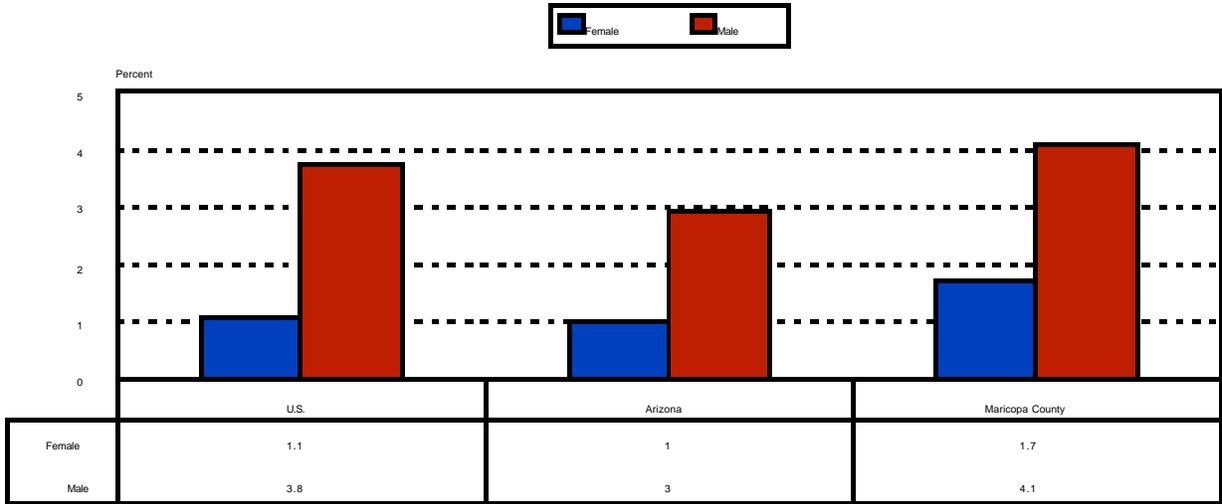
Based on a sample of 1,444, weighted by age, sex and ethnicity to Maricopa County 1990 census population.

Figure 46
Maricopa County behavioral risk factor surveillance 1991
percent binge drinking by sex for U.S., Maricopa County and Arizona



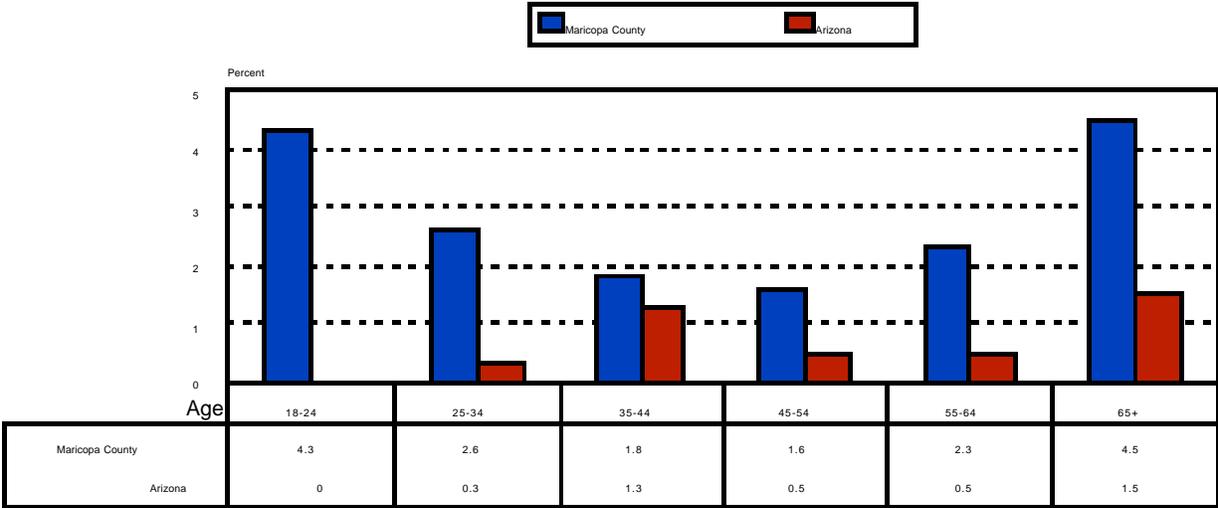
Based on a sample of 1,444, weighted by age, sex and ethnicity to Maricopa County 1990 census population.

Figure 47
Maricopa County behavioral risk factor surveillance 1991
percent drinking and driving by sex for U.S., Maricopa County and Arizona



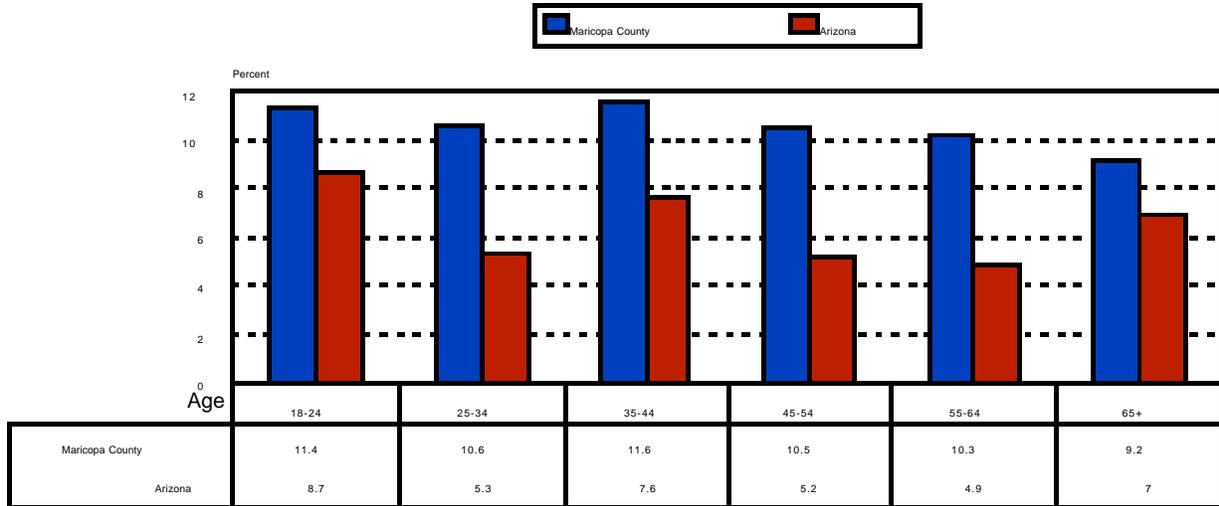
Based on a sample of 1,444, weighted by age, sex and ethnicity to Maricopa County 1990 census population.

Figure 48
Maricopa County behavioral risk factor surveillance 1991
percent chronic drinking among females of Maricopa County and Arizona



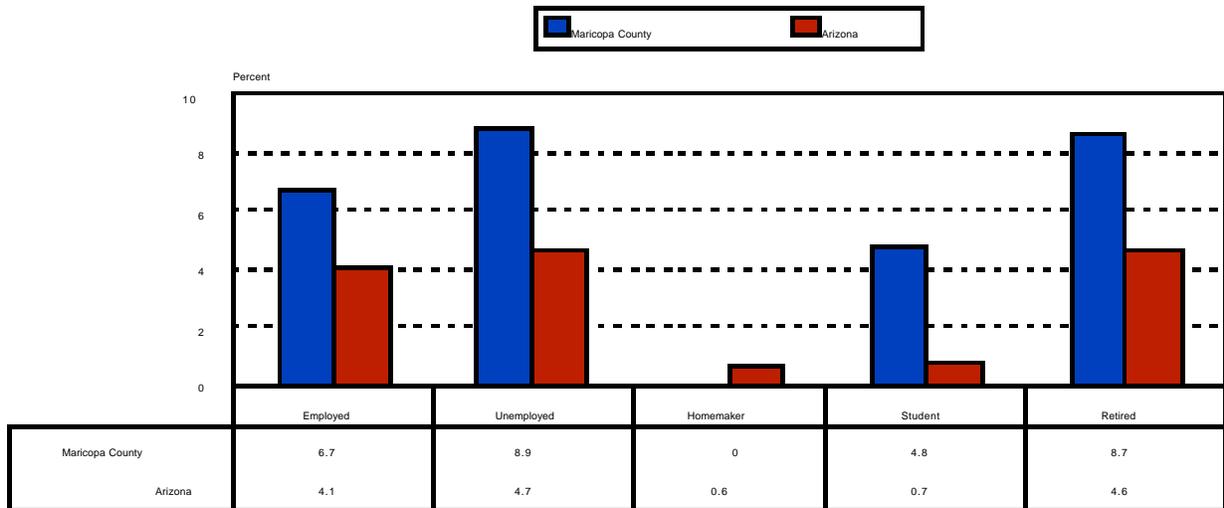
Based on a sample of 1,444, weighted by age, sex and ethnicity to Maricopa County 1990 census population.

Figure 49
Maricopa County behavioral risk factor surveillance 1991
percent chronic drinking among males of Maricopa County and Arizona



Based on a sample of 1,444, weighted by age, sex and ethnicity to Maricopa County 1990 census population.

Figure 50
Maricopa County behavioral risk factor surveillance 1991
percent chronic drinking by employment status for Maricopa County and Arizona



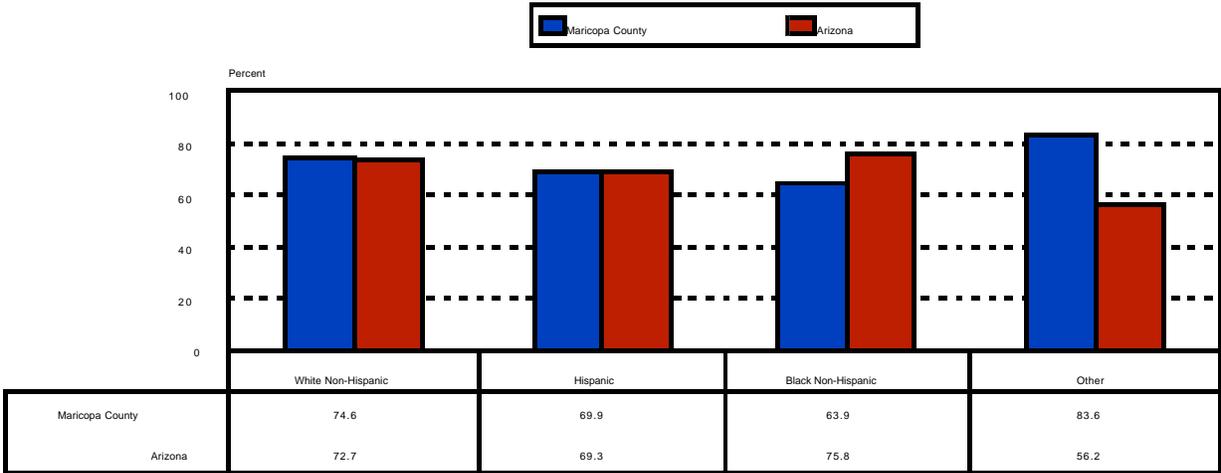
Based on a sample of 1,444, weighted by age, sex and ethnicity to Maricopa County 1990 census population.

Other risk factors

Figure 51 describes the percent of people using seat belts always by race/ethnicity. The percentages range from a low of 63.9 for African Americans to a high of 74.6 for Whites and 83.6 for “others.”

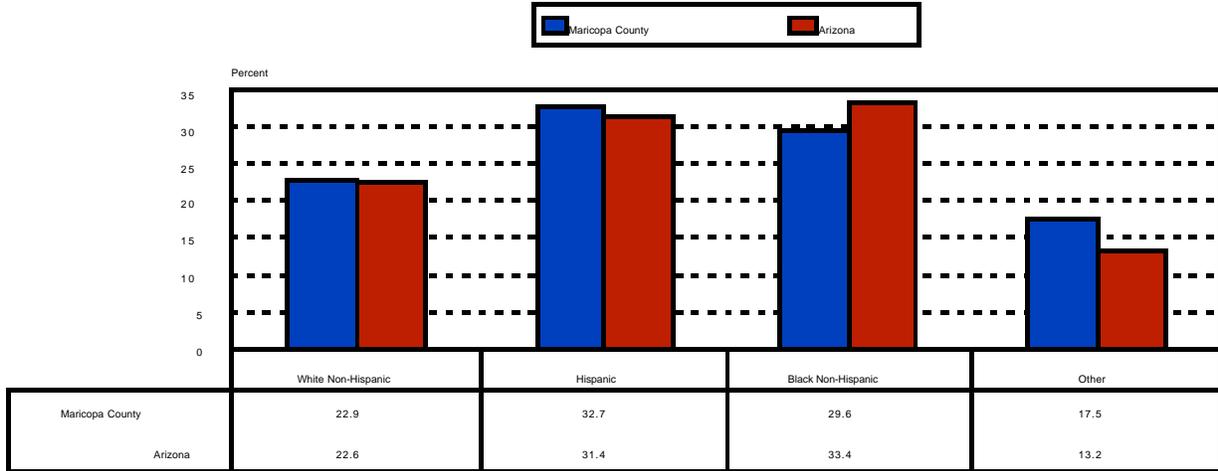
Figure 52 shows the percentage of people by ethnic group who reports not having spent any time in leisure activities. Hispanics have the highest rates of no leisure time activity.

Figure 51
Maricopa County behavioral risk factor surveillance 1991
percent seat belt use by race/ethnicity for Maricopa County and Arizona



Based on a sample of 1,444, weighted by age, sex and ethnicity to Maricopa County 1990 census population. Other = Asian, Native American and unknown.

Figure 52
Maricopa County behavioral risk factor surveillance 1991
percent no leisure time activity by ethnicity for Maricopa County and Arizona



*Based on a sample of 1,444, weighted by age, sex and ethnicity to Maricopa County 1990 census population.
 Other = Asian, Native American and unknown*

Socioeconomic data

Most of the data in this section are derived from the 1990 Census. The 1995 Census did not include socioeconomic variables. The quality of the data is discussed in the methods section.

Socioeconomic information by Health Status Area
Tables 12-17b describe socioeconomic indicators for the entire county and for each Health Status Area. Area 5 (South Phoenix and Guadalupe) is the area showing the lowest socioeconomic status levels. Area 6, covering Scottsdale, Paradise Valley and Fountain Hills, show the highest indicators.

Table 12
Maricopa County 1990
education by ethnicity - total county

Race Education	White #	White %	Hispanic #	Hispanic %	Black #	Black %	Native Amer. #	Native Amer. %	Asian #	Asian %	Other #	Other %	Total #	Total %
< 9th grade	64374	5.4	49435	31.2	3422	8.6	2187	12.1	2202	10.7	26824	33.9	99009	7.4
9th thru 11th grade	122662	10.3	28426	18.0	6322	16.0	3814	21.0	2018	9.8	14989	18.9	149805	11.1
High school graduate	308136	26.0	34355	21.7	8592	21.7	4985	27.5	3211	15.6	17331	21.9	342255	25.5
Some college	325731	27.4	27244	17.2	12017	30.3	4497	24.8	3531	17.2	12840	16.2	358616	26.7
AA degree	87954	7.4	7356	4.6	3403	8.6	1248	6.9	1578	7.7	3213	4.1	97396	7.2
BS-BA degree	188860	15.9	7838	5.0	4112	10.4	939	5.2	4712	22.9	2826	3.6	201449	15.0
Graduate degree	89425	7.5	3658	2.3	1765	4.5	461	2.5	3321	16.1	1152	1.5	96124	7.1
Total	1187142	100.0	158312	100.0	39633	100.0	18131	100.0	20573	100.0	79175	100.0	1344654	100.0
% of Total		88.3		11.8		2.9		1.3		1.5		5.9		100.0

Table 13
Maricopa County 1990
mean per capita income (in dollars) by race, ethnicity and health status area

Area	Families		With Children		With No Children		All Families		Total	
	#	%	Below Poverty Level	Above Poverty Level						
1	23	0.1	153	0.7	579	20,225	602	20,378	20,980	100.0
					2.8	96.4	2.9	97.1		
2	3,483	6.5	26,774	49.9	841	22,527	4,324	49,301	53,625	100.0
					1.6	42.0	8.1	91.9		
3	4,624	4.0	55,493	48.1	1,666	53,475	6,290	108,968	115,258	100.0
					1.4	46.4	5.5	94.5		
4	7,488	8.6	38,684	44.2	1,619	39,738	9,107	78,422	87,529	100.0
					1.8	45.4	10.4	89.6		
5	9,654	23.5	17,910	43.5	1,654	11,914	11,308	29,824	41,132	100.0
					4.0	29.0	27.5	72.5		
6	939	2.1	15,701	34.9	575	27,760	1,514	43,461	44,975	100.0
					1.3	61.7	3.4	96.6		
7	1,791	4.3	19,643	47.0	647	19,682	2,438	39,325	41,763	100.0
					1.5	47.1	5.8	94.2		
8	6,676	5.4	58,068	47.2	1,763	56,605	8,439	114,673	123,112	100.0
					1.4	46.0	6.9	93.1		
9	2,983	13.2	10,542	46.6	705	8,410	3,688	18,952	22,640	100.0
					3.1	37.1	16.3	83.7		
10	661	34.9	572	30.2	134	528	795	1,100	1,895	100.0
					7.1	27.9	42.0	58.0		
Total	38,322	6.9	243,540	44.0	10,183	260,864	48,505	504,404	552,909	100.0
					1.8	47.2	8.8	91.2		

Poverty level as defined in 1990 census, considering income and family size. This table represents families, not households

Table 14
Maricopa County households 1990
primary language spoken and linguistic isolation by health status area

% of Poverty Level Area	Under .50	.50 to .74	.75 to .99	1.00 to 1.24	1.25 to 1.49	1.50 to 1.74	1.75 to 1.84	1.85 to 1.99	2.00 and above	Ratio Total							
											#	%	Cum. %	#	%	Cum. %	#
1	1521	515	836	1315	1631	1824	585	953	46956	56136							
	2.7	0.9	1.5	2.3	2.9	3.2	1.0	1.7	836	100.0							
	2.7	3.6	5.1	7.5	10.4	13.6	14.7	16.4	100.0	100.0							
2	9759	4645	6317	7476	6736	8458	2907	5353	145692	197343							
	4.9	2.4	3.2	3.8	3.4	4.3	1.5	2.7	73.8	100.0							
	4.9	7.3	10.5	14.3	17.7	22.0	23.5	26.2	100.0	100.0							
3	14006	7738	10092	12720	13902	15083	5495	10697	331415	421148							
	3.3	1.8	2.4	3.0	3.3	3.6	1.3	2.5	78.7	100.0							
	3.3	5.2	7.6	10.6	13.9	17.5	18.8	21.3	100.0	100.0							
4	22705	10491	15022	19337	17858	20307	7358	12687	222879	348644							
	6.5	3.0	4.3	5.5	5.1	5.8	2.1	3.6	63.9	100.0							
	6.5	9.5	13.8	19.4	24.5	30.3	32.4	36.1	100.0	100.0							
5	29346	14081	16627	16427	13929	14693	3888	6616	69762	185369							
	15.8	7.6	9.0	8.9	7.5	7.9	2.1	3.6	37.6	100.0							
	15.8	23.4	32.4	41.3	48.8	56.7	58.8	62.4	100.0	100.0							
6	4151	1847	2794	3736	3314	4722	1426	2297	131856	156143							
	2.7	1.2	1.8	2.4	2.1	3.0	0.9	1.5	84.4	100.0							
	2.7	3.8	5.6	8.0	10.1	13.2	14.1	15.6	100.0	100.0							
7	10175	4621	4795	5295	5216	5684	1872	4223	126505	168386							
	6.0	2.7	2.8	3.1	3.1	3.4	1.1	2.5	75.1	100.0							
	6.0	8.8	11.6	14.8	17.9	21.3	22.4	24.9	100.0	100.0							
8	18160	10440	14773	17031	17949	21422	8970	13332	336711	458788							
	4.0	2.3	3.2	3.7	3.9	4.7	2.0	2.9	73.4	100.0							
	4.0	6.2	9.5	13.2	17.1	21.7	23.7	26.6	100.0	100.0							
9	7917	4916	5335	6088	5526	6326	1834	2865	46941	87748							
	9.0	5.6	6.1	6.9	6.3	7.2	2.1	3.3	53.5	100.0							
	9.0	14.6	20.7	27.6	33.9	41.1	43.2	46.5	100.0	100.0							
10	2239	738	757	759	682	467	209	311	1878	8040							
	27.8	9.2	9.4	9.4	8.5	5.8	2.6	3.9	23.4	100.0							
	27.8	37.0	46.4	55.9	64.4	70.2	72.8	76.6	100.0	100.0							
Total	119979	60032	77348	90184	86743	98986	34544	59334	1460595	2087745							
	5.7	2.9	3.7	4.3	4.2	4.7	1.7	2.8	70.0	100.0							
	5.7	8.6	12.3	16.6	20.8	25.5	27.2	30.0	100.0	100.0							

Poverty level as defined in 1990 census, considering income and family size.
 Population figures in 1990 are slightly higher than this total due to data suppression by the U.S. Census Bureau in certain census tracts to protect confidentiality.

Table 15
Maricopa County population 1990
families by poverty status, presence of children (under 18 years) and by health status area

Race Area	White	Black	Native American	Asian	Other	Hispanic	Non-Hispanic	Total
1	19,985	16,580	21,723	17,415	7,352	10,448	19,987	19,934
2	14,434	11,851	9,973	11,437	7,561	8,525	14,584	13,669
3	16,743	14,620	9,055	12,668	10,153	11,107	16,808	16,443
4	15,405	8,787	7,376	12,566	7,390	7,871	15,573	14,050
5	9,178	7,100	4,579	8,780	5,482	5,459	10,094	7,669
6	26,760	19,643	11,058	20,359	12,356	13,440	26,956	26,358
7	17,722	12,073	8,588	11,193	9,415	11,076	17,490	16,865
8	14,297	11,160	7,579	13,654	7,922	8,315	14,509	13,772
9	12,225	9,167	6,628	7,136	6,026	5,741	13,048	10,510
10	12,589	0	3,773	9,000	4,520	3,170	5,568	5,270
Total	16,182	9,546	6,660	12,503	7,008	7,608	16,375	14,970

*Poverty level as defined in 1990 census, considering income and family size. This table represents families, **not** households*

Table 16
Maricopa County population 1990
distribution of people by health status area and income as a percent of poverty level*

Language Area	English	Spanish Isolated	Spanish Not Isolated	Asian Isolated	Asian Not Isolated	Other Isolated	Other Not Isolated	Total Households
1	30879 92.7	48 0.1	309 0.9	0 0.00	6 0.02	268 0.8	1799 5.4	33309 4.1
2	60134 82.6	1205 1.7	7093 9.7	182 0.25	836 1.15	345 0.5	2998 4.9	72793 9.0
3	143895 87.9	1139 0.7	8075 4.9	328 0.20	1234 0.75	979 0.6	8079 4.9	163729 20.3
4	112471 79.6	3570 2.5	15849 11.2	635 0.45	1466 1.04	1093 0.8	6164 4.4	141248 17.5
5	31846 54.4	6626 11.3	17912 30.6	76 0.13	191 0.33	294 0.5	1641 2.8	58586 7.2
6	60776 89.0	328 0.5	2614 3.8	50 0.07	386 0.57	374 0.5	3722 5.5	68250 8.4
7	57220 84.0	658 1.0	5236 7.7	543 0.80	1235 1.81	204 0.3	3050 4.5	68146 8.4
8	147497 86.0	2301 1.3	12881 7.5	362 0.21	1438 .84	723 0.4	6305 3.7	171507 21.2
9	19298 68.6	1531 5.4	5947 21.2	51 0.18	228 0.81	228 0.4	931 3.3	28112 3.5
10	1334 53.7	19 0.8	137 5.5	0 0.00	5 0.20	70 2.8	917 36.9	2482 0.3
Total	665350 82.3	17425 2.2	76053 9.4	2227 0.3	7025 0.9	4476 0.6	35606 4.4	808162

*Poverty level as defined in 1990 census, considering income and family size.

Table 17a
Maricopa County census 1990
people by language spoken at home and health status area

Area Language	1		2		3		4		5		6	
	#	%	#	%	#	%	#	%	#	%	#	%
English	53940	94.3	156304	85.5	358807	91.1	263432	81.5	94144	54.9	137292	91.8
German	697	1.2	1227	0.7	2739	0.7	1940	0.6	394	0.2	1320	0.9
Yiddish	58	0.1	26	***.	132	***.	173	0.1	18	***.	110	0.1
Other-German	45	0.1	310	0.2	359	0.1	172	0.1	46	***.	142	0.1
Scandinavian	204	0.4	90	***.	275	0.1	171	0.1	46	***.	234	0.2
Greek	17	***.	46	***.	492	0.1	483	0.1	34	***.	259	0.2
Indic	0	0.0	373	0.2	792	0.2	182	0.1	85	***.	8562	***.
Italian	268	0.5	648	0.4	1862	0.5	821	0.3	230	0.1	861	0.6
French	257	0.4	563	0.3	2063	0.5	1344	0.4	519	0.3	1221	0.8
Portuguese	0	0.0	79	***.	109	***.	103	***.	21	***.	75	0.1
Spanish	519	0.9	19130	10.5	17283	4.4	43679	13.5	73281	42.7	5244	3.5
Polish	445	0.8	340	0.2	1169	0.3	573	0.2	55	***.	398	0.3
Russian	45	0.1	84	***.	126	***.	236	0.1	16	***.	26	***.
South Slavic	63	0.1	124	0.1	418	0.1	363	0.1	6	***.	190	0.1
Other - Slavic	322	0.6	206	0.1	614	0.2	163	0.1	79	***.	168	0.1
Other - Euro	95	0.2	301	0.2	883	0.2	493	0.2	50	***.	254	0.2
Arabic	0	0.0	199	0.1	416	0.1	436	0.1	65	***.	301	0.2
Tagalog	0	0.0	267	0.1	307	0.2	878	0.3	65	***.	95	0.1
Chinese	0	0.0	581	0.3	719	0.2	1950	0.6	37	***.	394	0.3
Hungarian	155	0.3	139	0.1	362	0.1	234	0.1	51	***.	150	0.1
Japanese	0	0.0	223	0.1	299	0.1	193	0.1	50	***.	73	***.
Mon-Khmer	0	0.0	44	***.	255	0.1	9	***.	101	0.1	0	0.0
Korean	20	***.	586	0.3	490	0.1	398	0.1	143	0.1	70	***.
Native American	12	***.	236	0.1	841	0.2	3262	1.0	1684	1.0	128	0.1
Vietcong	0	0.0	235	0.1	840	0.2	757	0.2	96	0.1	68	***.
Other	66	0.1	429	0.2	1073	0.3	827	0.3	259	0.2	379	0.3
Total	57228	100.0	182790	100.0	394025	100.0	323272	100.0	171575	100.0	149514	100.0
% of Total		2.9		9.4		20.2		16.6		8.8		7.7

Table 17b
Maricopa County census 1990
people by language spoken at home and health status area

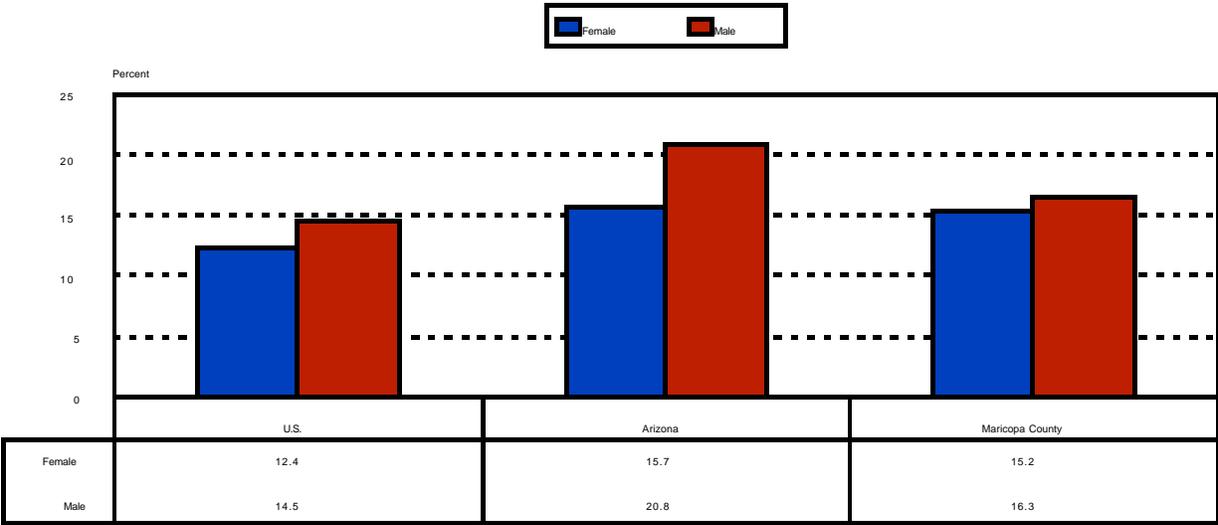
Area Language	7		8		9		10		Total	
	#	%	#	%	#	%	#	%	#	%
English	141659	87.7	374021	88.6	57220	68.8	5203	71.1	1642022	84.1
German	1007	0.6	2637	0.6	575	0.7	7	0.1	12543	0.6
Yiddish	27	***.	13	***.	6	***.	0	0.0	563	***.
Other-German	117	0.1	271	0.1	74	0.1	0	0.0	1536	0.1
Scandinavian	146	0.1	496	0.1	62	0.1	6	0.1	1730	0.1
Greek	133	0.1	152	***.	5	***.	0	0.0	1621	0.1
Indic	517	0.3	708	0.2	50	0.1	0	0.0	2769	0.1
Italian	339	0.2	980	0.2	128	0.2	0	0.0	6137	0.3
French	749	0.5	1574	0.4	307	0.4	14	0.2	8611	0.4
Portuguese	92	0.1	263	0.1	33	***.	0	0.0	775	***.
Spanish	10683	6.6	34021	8.1	23355	28.1	305	4.2	227500	11.6
Polish	234	0.1	454	0.1	81	0.1	0	0.0	3749	0.2
Russian	74	***.	182	***.	12	***.	0	0.0	801	***.
South Slavic	99	0.1	465	0.1	9	***.	0	0.0	1737	0.1
Other - Slavic	129	0.1	235	0.1	52	0.1	0	0.0	1968	0.1
Other - Euro	475	0.3	358	0.1	16	***.	6	0.1	2931	0.2
Arabic	317	0.2	351	0.1	8	***.	0	0.0	2093	0.1
Tagalog	216	0.1	495	0.1	169	0.2	0	0.0	2792	0.1
Chinese	1553	1.0	1141	0.3	171	0.2	0	0.0	6546	0.3
Hungarian	53	***.	247	0.1	13	***.	7	0.1	1411	0.1
Japanese	297	0.2	381	0.1	125	0.2	13	0.2	1654	0.1
Mon-Khmer	266	0.2	72	***.	0	0.0	0	0.0	747	***.
Korean	691	0.4	479	0.1	96	0.1	0	0.0	2973	0.2
Native American	513	0.3	916	0.2	499	0.6	1732	23.7	9823	0.5
Vietcong	449	0.3	450	0.1	22	***.	0	0.0	2917	0.1
Other	743	0.5	977	0.2	71	0.1	23	0.3	4847	0.2
Total	161578	100.0	422339	100.0	83159	100.0	7316	100.0	1952796	100.0
% of Total		8.3		21.6		4.3		0.4		100.0

Health insurance coverage and utilization

Three indicators of health care access and utilization are the percentage of people without health insurance, the percentage of births occurring in hospital and the rate of cesarean sections by method of payment. In the tables and figures presented in volume II, other indicators are offered.

Figure 53 shows health insurance coverage by sex for Maricopa County, the U.S. and Arizona for 1991. These proportions did not change significantly throughout the five intercensal years. Approximately 15-16 percent of adults had no health care coverage. The proportions for children were estimated at similar levels.

Figure 53
Maricopa County behavioral risk factor surveillance 1991
percent with no health insurance by sex for U.S., Maricopa County and Arizona



Based on a sample of 1,444, weighted by age, sex and ethnicity to Maricopa County 1990 census population. Denominator includes entire sample

Table 18 shows the percentage of births in 1991 and 1995 that took place in hospital in 1991, and slightly less, 98.6 in 1995. Ninety-nine percent of deliveries delivered in hospital.

Table 18
Maricopa County percentage of births in 1991 and 1995 delivered in hospital

Year	1991	1995
Hospital delivery	39,418 99.0	43,404 98.6
Non-hospital delivery	407 1.0	620 1.4
Total	39,825*	44,024

*82 observations missing

Tables 19 and 20 show the number and percentage of cesarian deliveries by method of payment in 1991 and 1995. It is interesting to note that in both years the highest percentage of primary cesarian deliveries took place among those with private insurance coverage, and the lowest among those classified as “self-pay.”

Table 19
Number and percentage of caesarian deliveries by method of payment (1991)

Insurance	AHCCCS*	IHS**	Private Ins.	Self	Unknown	Total
Primary Caesarian delivery	1,391 10.2	40 8.5	2667 13.3	437 8.4	59 10.0	4594 11.5
Secondary Caesarian delivery	798 5.9	22 4.7	1524 7.6	183 3.6	29 5.0	2556 6.4
All other methods of delivery	11,388 83.9	409 86.8	15,901 79.1	4,559 88.0	500 85.0	32,757 82.1
Total	13,577 100.0	471 100.0	200,092 100.0	5,179 100.0	588 100.0	39,907 100.0

*AHCCCS Arizona Health Care Cost Containment System

**IHS - Indian Health Service

Table 20
Number and percentage of caesarian deliveries by method of payment (1995)

Insurance	AHCCCS*	IHS**	Private Ins.	Self	Unknown	Total
Primary Caesarian delivery	1,685 9.0	35 10.7	2,698 12.1	145 6.8	44 7.3	4,607 10.5
Secondary Caesarian delivery	989 5.3	12 3.7	1,392 6.3	86 4.0	18 3.0	2,497 5.7
All other methods of delivery	16,076 85.7	279 85.6	18,121 81.6	1,901 89.2	543 89.7	36,920 838
Total	18,750 100.0	326 100.0	22,211 100.0	2,132 100.0	605 100.0	44,024 100.0

*AHCCCS Arizona Health Care Cost Containment System

**IHS - Indian Health Service

Methods

Data Sources and Limitations

This report includes information from many sources. Table 21 (page M-3) lists the types of data used and their sources. The quality and reliability of the data are variable.

All mortality and natality data are subject to errors of transcription beginning with the medical record, and including coding error and data entry errors. These errors should be controlled by constant quality review at all points through close monitoring, continuous training and periodic sample surveys. Unfortunately, Arizona does not yet have all these quality assurance measures in place, either at the county or at the state level. Thus, the degree to which information on the certificates is a valid and accurate reflection of the characteristics of the decedent, causes of death, characteristics of the newborn or parental and pregnancy characteristics is, at this point, unknown. No studies have been done estimating the proportion of birth or death events actually covered by our vital record, although given the medical and vital registration system, it is assumed to be (and probably is) very high. This is an important pending evaluation, especially in a state with relatively large minority populations and many isolated, sparsely populated areas. Miscounts and misclassifications in the vital record as well as in

disease registers in other states have been shown to exceed 33 percent for specific populations.²

However, there are some indications of a relatively high percentage of random errors originating in transcription and data entry. For example, just 82 percent of prenatal care visits listed in the birth certificates agreed with the medical record in a pilot study done in 1993 in one Maricopa County hospital. Pima County found that in recent years up to 80 percent of certificates had at least one data entry error. However, these errors do not seem to be systematic and, thus, although they affect the precision of the measurement, they should allow for monitoring of trends. Efforts are underway to evaluate the birth certificate registration system as part of the implementation of the Electronic Birth Certificate system in 1998-1999.

Although death is one of the more easily measurable events in health statistics, the data still are fraught with problems. Primary among these is the misclassification of causes of death. Since 1994 new procedures have been in place in Maricopa County to assure the quality of the data. Although this process is not yet complete, there is some evidence derived from procedural reviews as well as from the decrease in the rates of ill-defined conditions that indicate the quality of the death certificates has improved.

2. Frost F. et al. *Racial Misclassification of Native Americans in a SEER Registry*. J. Natl. Cancer Inst. 1992; 84: 957-961. Sugarman, J.R. et al. *Racial Misclassification of American Indians: its effect on injury rates in Oregon, 1989-1990*. AJPH 1993; 83:681-684.

Table 21
Types of data and sources

Type of data	Source of data
Demographic data	Based on the 1990 United States Census and the 1995 Arizona Special Census.
Nativity data	Based on birth certificates, as reported by the Arizona Department of Health Services.
Mortality data	Based on death certificates, as reported by the Arizona Department of Health Services.
Morbidity data	Based on survey data or cases of diseases reportable by law, some registry data and some patchwork information collected for some areas of the county by non-health organizations such as police departments, fire departments and community coalitions. Each source is specified when the data are presented.
Risk factors	Derived from birth certificates, the Behavioral Risk Factor Survey (B.R.S.F.) and other surveys.
Socioeconomic measures	Based on the 1990 U.S. Census, as well as some birth and death certificate information.
National morbidity And mortality data	The Centers for Disease Control and Prevention, National Center for Health Statistics.
Year 2000 national health objectives	Healthy People 2000, DHHS, PHS.

Population estimates and data sources

All health measures used in this report depend on population figures as denominators. We have used population information from the 1990 and 1995 Census and estimates for intercensal years provided by the Arizona Department of Economic Security (DES).

Both the 1990 and 1995 census in Maricopa County had undercounts of populations, especially for those in some rural areas, minority and immigrant populations and homeless people. Additionally, the 1995 census was disrupted by the federal budget crisis, causing unexpected staff turnover and interruptions in data collection, recruitment and training of census workers. Thus, the population of Maricopa County is probably slightly larger than the census counts.

DES estimates for intercensal years are re-evaluated periodically. Additionally DES periodically adjusts for overcounts and undercounts of Census figures. The differences in these adjustments are minimal (in the order of 100 people for the entire state and fewer than 700 per city in the county). We have chosen to maintain denominator estimates for each year and not change them, because rates computed with one estimate may not be the same when computed with a more recent estimate for that same year. We have listed the estimates used for each year and their sources in Table 22). These estimates are not necessarily the most recent ones produced by DES but they are the ones used by the Department of Public Health in computing health statistics for previously published reports. The estimates are anchored by 1980, 1985, 1990, and 1995 Census figures.

This report uses denominator estimates developed by the MCDPHS for age, sex and race/ethnicity for specific geographic areas within the county, based on Census data and DES estimates. The census figures used in this report are uncorrected for over-counts or under-counts. We have used census data as they appear, without modifying any of the imputed or assigned values. We have used the tables reflecting total counts and not estimates derived from a sample whenever possible.

Even in census years, the total population of the county might vary slightly from one table to another, depending on the geographical divisions examined. This is a result of suppression of some types of data (age, sex, ethnicity,

for example) at the level of small Census tracts in order to protect the confidentiality of the responses and the privacy of the respondents.

Throughout this report, Maricopa County, Arizona and U.S. health statistics are compared to each other. When they refer to the entire population, these comparisons use crude rates, not age-adjusted ones. The adult population of Maricopa County is slightly younger than that of Arizona, which is, in turn, slightly younger than that of the United States. Thus, some differences in crude disease rates would be expected even if all the age-specific rates were equal. Generally speaking, the population of Maricopa County should have lower crude disease rates than either the population of Arizona or the U.S. because it is slightly younger.

When comparisons are made to rates that are National Objectives for the Year 2000, some care must be taken in

Table 22
Population estimates
Maricopa County, 1980-1995*

Year	Population	Source
1980	1,509,175	1980 Census
1983	1,642,300	8/86 DES Estimate
1984	1,726,398	6/89 DES Estimate
1985	1,837,912	1985 Special Census
1986	1,909,998	6/89 DES Estimate
1987	1,976,600	9/91 DES Estimate
1988	2,032,000	9/91 DES Estimate
1989	2,089,900	9/91 DES Estimate
1990	2,122,101	1990 Census
1991	2,181,950	10/92 DES Estimate
1992	2,233,700	10/92 DES Estimate
1993	2,238,263	3/93 DES Projection
1994	2,285,200	5/93 DES Projection
1995	2,551,765	1995 Special Census

**Estimates are as of July 1 of each year.*

Sources: 1980 and 1990 U.S. Census, 1985 and 1995 Special Census Data and Arizona Department of Economic Security (DES) Estimates and Projections.

the interpretation. The numerators for Maricopa County rates were chosen to match the ICD-9 codes specified in Healthy People 2000 (see Table 23). Many of the general population rates designated as Year 2000 Objectives are age-standardized to the 1940 U.S. population. However, as previously mentioned, Maricopa County rates are not standardized to any population. Standardization was not carried out because of the many methodologic problems regarding standardization of rates among radically different populations, including the population cho-

sen as a standard and the effects of standardization on the presentation of data.³ These issues cannot be discussed here; refer to the footnote for more information.

Despite these potential problems in comparisons, population rates for Maricopa County were not age-adjusted because the Health Status Report of the county should reflect real rates. Instead, whenever appropriate and feasible, age specific, sex-specific and race/ethnic specific rates are presented.

Table 23
Definitions of *Healthy People 2000* grouped cause-of-death data by international classification of disease codes, ninth revision

Cause-of-Death Group	ICD - 9 Codes
Alcohol - related motor vehicle crashes	E810.0-E819.9
Breast cancer (female)	174.0-174.9
Cancer (all sites)	140.0-208.9
Cervical cancer	180.0-180.9
Child abuse	E967.0-E967.9, E968.4
Chronic obstructive pulmonary disease	490.0-496.9
Cirrhosis	571.0-571.6
Colorectal cancer	153.0-154.3, 154.8, 159.0-159.9
Coronary heart disease	410.0-414.9, 402.0, 402.9, 429.2
Drowning	E830.0-E830.0, E832.0-E832.9, E910.0-E910.9
Drug abuse related deaths	292.0-292.9, 304.0-304.9, 305.2-305.9, 850.0-858.9, 950.0-950.5, 962.0, 890.0-895.4
Falls and fall-related injuries	E880.0-E888.9, E922.0-E922.3, E922.8-E922.9, E955.0-E955.4,
Unintentional firearm injuries	E965.0-E965.4, E970.0, E985.0-E985.4
Homicide	E960.0-E969.9
Lung cancer	162.2-162.9
Motor vehicle crashes (non-alcohol)	E810.0-E825.9
Residential fires	E890.0-E899.9
Stroke	430.0-438.9
Suicide	E950.0-E959.9
Unintentional injuries (all)	E800.0-E949.9

3. Feinlib M., Zarati, A.O., eds. Reconsidering Age Adjustment Procedures: Workshop proceedings. NCHS, Vital Health Stat 4 (29). 1992.

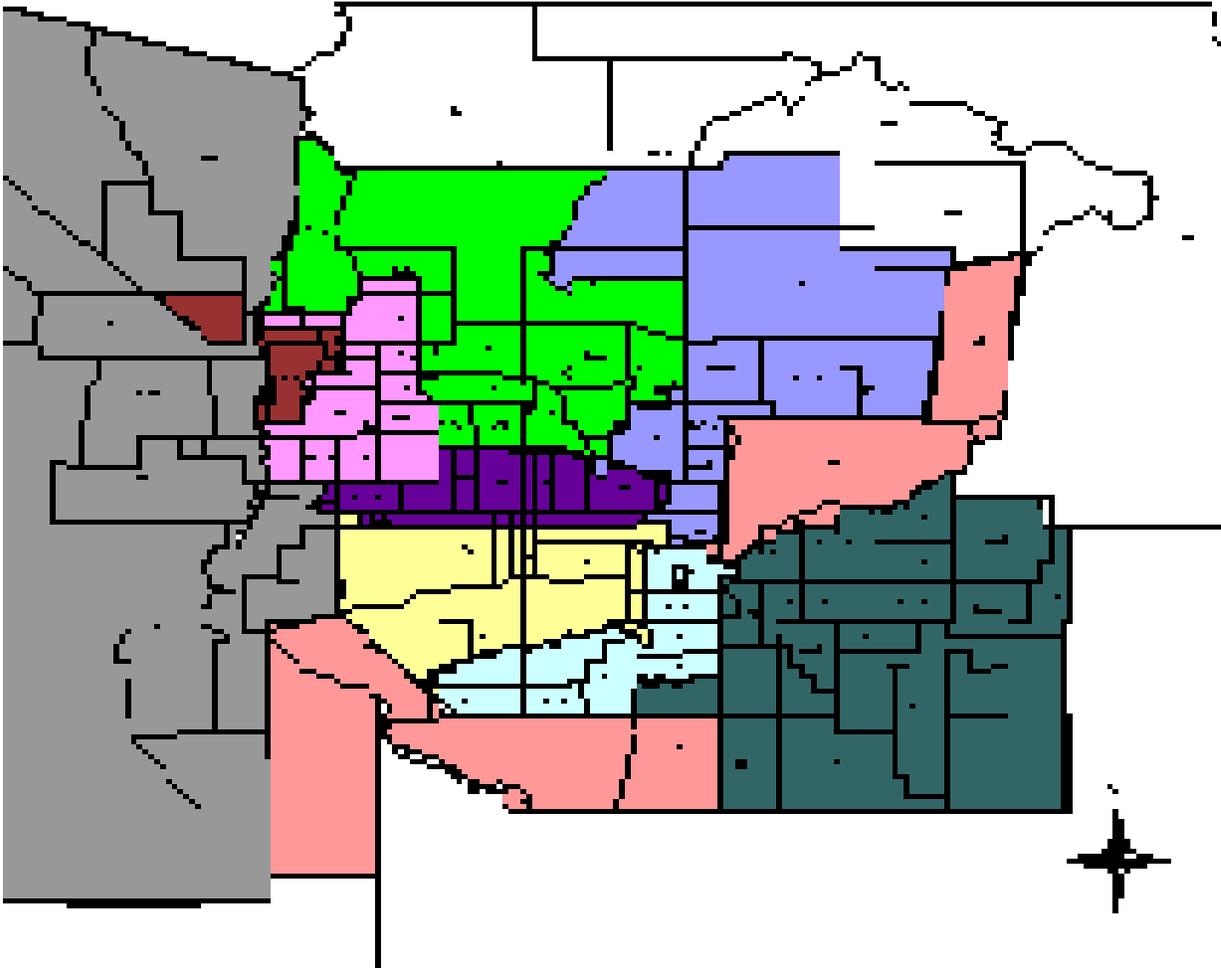
Health Status Areas Definitions

Among the reference tables included in this report are tables defining zip codes, health status areas, nursing districts and Maricopa Association of Governments Planning districts in terms of census tracts. Some of these definitions are approximate, because the boundaries of the larger areas do not always match those of the census tracts. We have published these tables to facilitate the use of census and health data to people or institutions for whom the census tract is not a meaningful unit to define an area, even though it is the basic building block of numerator and denominator data.

Demography, socioeconomic status, geographic consid-

erations and political divisions were the elements that entered into the definition of the 10 Health Status Areas in the county. For purposes of health status analyses we have divided the county into the following areas: (1) Sun City, (2) Glendale, (3) North Phoenix, (4) Central Phoenix, (5) South Phoenix, (6) Scottsdale/Paradise Valley, (7) Tempe/Ahwatukee, (8) Mesa/Gilbert, (9) West Maricopa County, and (10) the three Native American Reservations (Gila River Indian Community, Salt River/Pima Indian Community and Fort McDowell Indian Community). See Figure 54. One Census tract (303.43) was changed since the previous Health Status Report, from area 3 to area 6.

Figure 54
Maricopa County's 10 health status areas



Definitions: Population Attributes, Risk Factors and Health Indicators

Attributes, risk factors and health indicators are different yet related measures describing a population and its health status. Additional definitions of health-related, technical or epidemiologic words and concepts are found in the Glossary. Please refer to it as necessary when examining the information in this report.

Attributes are any characteristics that describe a population or an individual, such as demographic ones (age, sex, race, ethnicity), geographic ones (place of residence or birth), health-related characteristics (people with high blood pressure, people immunized against tetanus, etc.). In parts of this report we will examine groups of people defined by specific attributes (for example, teenage women residents in Chandler who had deliveries in 1991). We can better focus our analyses of health and disease in this manner.

Risk factors are population or individual attributes that are associated with diseases or health-related conditions. Some risk factors are modifiable, such as a high fat diet. Others are not, such as female sex as a risk factor for breast cancer, or older age for some diseases. Not all risk factors are causative, some are only associated with a disease, and can be identified only as markers for disease not as causes of disease. Risk factors can be environmental, behavioral, genetic, biological and others.

Health indicators and/or indices are statistical/numerical measures such as infant mortality, incidence rates of a disease, or composite scales of several indicators that reflect the health status of people in a community.

Statistical Calculations and Definitions

Some statistical measures of health and disease will be used repeatedly throughout this report. The one used most frequently is the rate. The traditional definition of an incidence rate in epidemiology, also referred to as risk, is a proportion ranging from 0 to 1, in which the numerator represents individuals who have developed the disease or condition within a specified time period (cases) and the denominator represents all individuals at risk for the condition, (including the cases) during that time period. The more exact definition of rate (change in disease status per person-time unit, instantaneously, computed by using calculus integrals and derivatives from which incidence density functions are derived) will not be used in this report. For our purposes of evaluation and comparison, the traditional rate suffices.⁴

A rate enables comparisons among areas and populations because it measures the number of events in a specific time period among a specific defined number of people. It would be impossible to compare the births in 1990 in the entire U.S. (4,158,212) to the births in

Maricopa County (40,230) unless we specified that in the U.S. there were 16.7 births per 1000 population during 1990, whereas in Maricopa County there were 19.0 births per 1000 population during the same year. We can then evaluate whether Maricopa County has higher or lower general fertility than the U.S. This measure can be further refined (as can any rate) by looking at it not just by population in general, but, for example, by age and ethnicity of the mother, and thus narrowing the description further.

Another measure, similar to a rate, is a ratio. All rates are ratios, but not all ratios are rates. In a ratio, the events in the numerator are not necessarily included in the denominator. For example, the fetal death ratio is the ratio of fetal deaths to live births. Sometimes ratios are called rates and used as rates even though they truly are not.

In a few tables in this report only counts of events are used and not rates. The reasons vary, sometimes because there have not been any population changes, so using rates

4. See, for example, Kleinbaum, D.G., Kupper, L.L., and Morgenstein, H. *Epidemiologic Research* 1982. Van Nostrand Reinhold, New York.

would not add anything to the analysis. At other times because either a defined denominator for the cases cannot be identified or the changes in the underlying population are unknown.

For all rates published in this report, the raw data also are published, so that anyone can do the specific calculations. We have not included confidence intervals in the tables. They can be calculated easily from the data provided.